



ON THE SULPHURIC ACID OF THE BRIT. PH.

BY J. C. BROUGH.

WHEN noticing the sulphuric acid of the Brit. Ph.,* I ventured to contradict certain statements made by Dr. Redwood in a lecture delivered before the members of the Pharmaceutical Society. My remarks have been criticised in turn by Dr. Redwood,† who endeavours to prove that his objections to the description of acidum sulphuricum, given in the Pharmacopœia, are beyond dispute, and in strict accordance with the results of the latest investigations. The acid referred to is prepared by distilling commercial oil of vitriol, and rejecting the first and last portions; and it is described in the *Materia Medica* as "monohydrated sulphuric acid, HO,SO_3 " having the sp. gr. 1.846. Dr. Redwood says, that the product of the pharmacopœia process will not realize this description; and further states, that the monohydrated acid has a *higher specific gravity*, and that it *congeals in cold weather as glacial acetic acid does*. It is to be regretted that Dr. Redwood omitted to cite his authority for these statements, which are at variance with the teaching of every English text-book of chemistry. Had he mentioned the researches of Marignac, I could not have misunderstood the scope of his criticism; for when I took the part of the Pharmacopœia writers, I was not entirely ignorant of the results obtained by that chemist, though, I must confess, I had not then read his original paper.‡ The fact that this paper, published more than ten years ago, had not been noticed by our best scientific writers, led me to suppose that Marignac's statements required confirmation. That they were not generally accepted by English chemists in 1861, is evident from a short paper on hydrated sulphuric acid, read by Dr. Lyon Playfair before the Royal Society of Edinburgh in January of that year; this paper gave an account of some experiments on evaporation of sulphuric acid, which led to results quite different from those obtained by Marignac.

As Dr. Redwood compared the monohydrated sulphuric acid with glacial acetic acid, and spoke of its congelation in cold weather as a well-recognized phenomenon, I could not help thinking that he was referring all the while to the bihydrated acid ($2\text{HO},\text{SO}_3$), which is generally called the *glacial acid*, on account of its property of readily freezing.

On consulting the most recent treatises on chemistry, I found that oil of vitriol was always described as the monohydrated acid, and was given a freezing point far below any temperature we get in cold weather.

Dr. Odling, the most advanced chemist of our time, recommends in his "Manual" nearly the same process of purifying the acid as the Pharmacopœia, and describes the product as a definite chemical compound. He places the freezing point of this acid as low as -35° Fahr. On the other hand he states, that the hydrate, "called glacial sulphuric acid" ($2\text{HO},\text{SO}_3$), solidifies at about $+47^\circ$.

Professor Miller, again, in the text of his "Manual," describes concentrated oil of vitriol as "a definite hydrate, consisting of one atom of acid and one of water," though at the same time he gives the principal results of Marignac's experiments in a note.

Abel and Bloxam, in their careful work, give "oil of vitriol" as a synonym of monohydrated sulphuric acid; and in the last edition of "Fownes," revised by Professor Hofmann, it is distinctly stated that "the most concentrated sulphuric acid, or oil of vitriol as it is often called, is a definite compound of 40 parts real acid and 9 parts water;" that is to say, it has the formula given in the Brit. Ph.

The following table gives the specific gravities and freezing points of the two hydrates according to different authorities:—

	HO,SO_3		$2\text{HO},\text{SO}_3$	
	Sp. gr.	Freezes.	Sp. gr.	Freezes.
Miller	1.842	-30°	1.78	$+47^\circ$
Olding	1.842	-30°	1.78	$+47^\circ$
Abel and Bloxam ..	1.848	-29°	1.78	$+39^\circ$
Apjohn	1.846	-29°	1.78	$+33^\circ$ or 34°
Marignac .. sp. gr. at 54°	1.842, melts at		Melts at $+47^\circ$ after freezing.	
	$+51^\circ$ after freezing			
Redwood .. sp. gr. above 1.846, "congeals in cold weather."				

It will be seen from the above table that the Brit. Ph. is not further behind the present state of knowledge on the subject of monohydrated sulphuric acid than the recent treatises of the authors whose names are placed above Marignac. What would Dr. Redwood have said had its compilers adopted Marignac's views, and given to oil of vitriol some such unusual formula as $13\text{HO},12\text{SO}_3$?

With respect to the sp. gr. of monohydrated sulphuric acid—that is to say, distilled oil of vitriol—Dr. Apjohn states, that he found the mean of four separate experiments with very delicate instruments to be 1.8457. This corresponds with the sp. gr. given in the Brit. Ph. In 1861, Dr. Playfair was led to the conclusion that 1.842 was too low, and that the old number, 1.848, was more correct.

To return to Dr. Redwood. If Marignac's unconfirmed statements respecting the composition of concentrated oil of vitriol are to be accepted in preference to the later teaching of our leading British chemists, his objections to the description of this acid in the Brit. Ph. are well founded. But whether his long dissertation upon this one article be taken as an example of sound criticism or of mere hair-splitting, I feel greatly obliged to him for taking the trouble to explain how I had mistaken his meaning.

RARE METALS.

THE NEW METAL INDIUM.—EXPERIMENTS WITH MAGNESIUM.

The spectroscope has already done good service in the cause of science, and its uses are extending day by day. The rare metals Cesium and Rubidium have recently, by its assistance, been recognised in beet-root sugar and in tea and coffee.

Thallium, originally discovered by its aid by Mr. Crookes, is now found to be an ingredient in many well-known minerals, and to be present in minute quantity in many articles of human consumption, such as tobacco, molasses, chicory, the yeast of wine, etc.

In a spring near Frankfort there is a strange admixture of cesium, rubidium and thallium salts in the saline residue left after the evaporation of the water.

The most recent achievement of the spectroscope, however, has been the discovery of a new metal termed *Indium*, in the zinc-blende of Freiberg, by the German chemists Reich and Richter.

The metal has been discovered in exceedingly small quantity, so that its chemical history is not at present very exact. It has been termed Indium, because its spectrum consists of two very bright indigo-coloured lines, and its compounds tint the colourless flame of a Bunsen burner of a violet colour. Indium appears somewhat to resemble the metal zinc, with which it has hitherto been always found in combination. Its oxide, which is white, is easily reduced before the blow-pipe, and is precipitated from its salts by potash and ammonia, but is insoluble in excess of either of these reagents; hence it differs from the oxides of zinc and aluminium. The oxide may be separated from oxide of iron, with which it is connected in the blende of Freiberg, by precipitating the latter with bicarbonate of soda.

Indium in a metallic state is a soft metal, making paper in a manner similar to lead; it is easily soluble in hydrochloric acid, and heated in the open air it oxidizes freely.

The properties of Indium were demonstrated at Professor Roscoe's Lecture at the Royal Institution, on Friday, May 6th.

* See March Number, p. 47.

† See April Number, p. 59.

‡ *Annales de Chim. et de Phys.* 3rd Series. Vol. 30.

After describing this new element, the lecturer spoke of other recent discoveries made by means of spectrum analysis, and of new applications of the spectroscope to the arts. The analysis of the light of the sun's rays has been further prosecuted, and it is found that potash compounds do not exist in the solar atmosphere. The application of the spectroscope to the manufacture of steel by the Bessemer process promises to be of great importance, as the process should be arrested at the moment when the flame given out by the burning iron shows the character of the metal has changed.

Mr. Roscoe showed the application of the metal magnesium to photographic purposes, the spectrum of burning magnesium being very rich in chemically active rays. The brightness of this metal when burning may be compared with that of the sun, both as regards the chemical and visible rays. If the surface of the burning magnesium has an apparent magnitude equal to that of the sun seen from a certain point, the chemical action of the magnesium on that point is equal to that produced by the sun at an elevation of nearly ten degrees above the horizon. The proportion of chemical rays existing in magnesium light, is greater as compared with its visible light than the proportion existing in the sun's light is as compared with the visible light of the sun.

A thin magnesium wire produces in burning as much light as 74 composite candles, and to continue this light for 10 hours, 72 grammes (equal to 2½ ounces) of magnesium must be burnt, which quantity would be equal in illuminating power to 20 pounds of candles.

A magnesium lamp has been constructed consisting of a magnesium wire wound on a coil; this wire is gradually unwound by an arrangement of toothed wheels and pinions moved by clock-work or any other convenient motive power, and forced through a narrow glass tube, being burnt as it issues from the extremity.

Magnesium wire of size suitable for burning is now manufactured under Sonstadt's patent, and sold at the rate of 3d. per foot; the burning of one inch of wire being amply sufficient to produce a positive picture with dry collodion.

During the lecture a negative of Professor Faraday was taken by the magnesium light; from this a positive portrait was printed by a few seconds' exposure, and exhibited on a white screen by means of the electric light.

THALLIUM.

In an elaborate article, by Mr. W. Crookes on this metal, which appears in the *Journal of the Chemical Society* for April, this distinguished chemist sets at rest the question of the place of thallium amongst the metals in a most conclusive manner. Apparently for no other reason than that the atomic weight of thallium was nearly in numerical relation to those of potassium, sodium, lithium, cesium, and rubidium, M. Dumas considered that it belonged to the alkaline group. Mr. Crookes always maintaining that it was a heavy metal belonging to the mercury, lead and silver groups. The following extract from the paper in question must surely convince any one (except, indeed, a Frenchman), that Mr. Crookes' view is the correct one:—

"In favour of the relationship of thallium to the alkali-metals, the following facts have been adduced:—It forms a readily soluble, highly alkaline oxide, a soluble and alkaline carbonate, an insoluble platinichloride, and with alumina, a double sulphate having the crystalline form of common alum, with a similar composition. Dumas also classes it with the alkali-metals, because it is necessary to halve its atomic weight in order to make its atomic heat equal the atomic heats of other metals; and he gives calculations to prove that the atomic weights of thallium and the alkali-metals are numerically related. Another argument on this side of the question is, that thallium sometimes accompanies the alkali-metals in mineral waters; this, however, is no argument at all, as the same reasoning would prove that iron and most other metals belong to the same class.

"In support of the view that thallium is one of the heavy metals, the following reasons may be given:—The argument from the alkaline character of the oxide applies both ways. The oxides of lead, silver, and mercury, are well known to be soluble in water, and communicate to it an alkaline reaction.

This is not very marked, owing to their slight solubility, but there is little doubt that if we could find a neutral liquid, which would dissolve either of those oxides in larger quantities, their alkaline character would become more apparent. Such a liquid, as Erdmann has pointed out, exists in a solution of neutral acetate of lead, which dissolves considerable quantities of oxide of lead, forming a solution as alkaline as that of oxide of thallium, and readily attracting carbonic acid from the air. Oxide of silver also appears to be more soluble in an aqueous solution of nitrate of silver than in pure water, and reacts more strongly alkaline. The slight affinity which oxide of thallium has for water, also shows it to be more allied to a heavy metallic oxide; it is not only non-deliquescent, but when its aqueous solution is evaporated even at the ordinary temperature over sulphuric acid in a vacuum, it gives up all its water, and leaves the anhydrous oxide; it is difficult to conceive a more striking contrast to the behaviour of a true alkali under the same circumstances. The formation of an alum is considered by some authorities to be a strong argument in favour of the relationship of thallium to the alkali-metals. This argument falls to the ground now that Professor Church* has obtained a silver-alum crystallizing in octahedrons, and containing 24 equivalents of water. The insolubility of the double chloride of platinum and thallium has, in my opinion, no bearing whatever on its classification. The metal stands alone in this respect; platinichloride of thallium is almost as insoluble as sulphate of baryta, and in comparison with this, the platinum-salt of potassium may be called extremely soluble; whilst even the rubidium and cesium salts must be regarded as soluble by the side of the thallium-salt. The fact of thallium having been obtained by Böttger, in conjunction with the alkalies in an analysis of a certain mineral water, is an accident, depending upon the special analytical process which he adopted.

"Again, it is urged by Dr. W. A. Miller, that the chemical energy of the alkali-metals lithium, sodium, potassium, rubidium, and cesium, increases in the order mentioned, which is that of their equivalents; whilst thallium, with a higher equivalent than any of these, shows a greatly diminished chemical activity. Numerical relations between atomic weights are of little account, for figures can be made to prove anything. I may, however, remark that Dumas uses in his calculations an old and now admittedly erroneous equivalent for cesium (123 instead of 133), and that by similar processes of addition, multiplication, or subtraction, it would be easy to prove that thallium belonged to any desired group, especially the mercury, lead, and silver group.†

"As further reasons for classing thallium with the heavy metals, may be urged the complete, or nearly complete insolubility of its peroxide, sulphide, phosphide, iodide, bromide, chloride, chromate, and phosphate; its ready reduction from aqueous solutions of its salts by metallic zinc; the highly poisonous character of its compounds; the production of a brown insoluble peroxide by electrolytic means; its high atomic weight; the complexity of its photographic spectrum, shown by Dr. W. A. Miller, to contrast strongly with the simplicity of those of the alkali-metals; its low conducting power for electricity, which is close to that of lead and of tin, and much inferior to that of the alkali-metals; its specific heat which coincides with that of lead; its density and melting point, very near those of lead; and, finally, its physical appearance and characters, which approach so nearly to those of lead, that few persons would notice at first sight any difference between the two metals."

ON THE BOILING OF LIQUIDS.

At a recent meeting of the Royal Institution, Albemarle-Street, Mr. Grove delivered a lecture on the boiling of water and other liquids. The lecturer commenced with the startling paradox that water never boils at all; but that that phenomenon which we term boiling or ebullition really consists in the evaporation of the vapour into a bubble of air, liberated or disengaged from the water by the elevation of temperature. Mr. Grove showed that water boiled

* *Chemical News*, March 26, 1864.

† $\text{Eq Hg} + \text{Eq Pb} = \text{Eq Tl}$; $\text{Eq Ag} + 2 \text{Eq Mb} = \text{Eq Tl}$.

equally in an open vessel, air appears to be absorbed as fast as it is carried off by the escape of vapour; but that in a very deep vessel the air boils with violent convulsions, the escape of steam taking place at intervals between which the temperature of the water rises much higher than 212° Fah., and then a sudden explosive burst occurs, almost resembling that of ignited gunpowder. In a long, open tube with a narrow neck, Mr. Grove found it possible to heat water to 230° Fah.

In the course of his experimental investigations, Mr. Grove observed that it was perfectly impossible to free water entirely from air, for that after being deprived of air by the air pump, and boiled under a great depth of oil for ten days, a small bubble of air was always liberated when the boiling was recommenced; and that this was equally true of bromine and other volatile liquids such as mercury, melted sulphur, phosphorus, etc., as the condensed vapour from these liquids when boiled under every possible precaution always have a bubble of permanent incondensable gas.

ATOMS.

On Friday week a very important lecture, on the Atomicity of certain of the Metals, was delivered by Professor Williamson before a crowded audience, in which he showed the reasons that have induced Canizzaro and others to double the atomic numbers of nearly twenty of the metals, including the calcium group, iron, zinc, copper, and several others. The lecture is too important to dismiss in a paragraph, giving as it did the first popular account of the latest development of modern theoretical chemistry. In an early number we shall therefore give a more detailed notice of it.



UNITED SOCIETY OF CHEMISTS AND DRUGGISTS.

THE EXECUTIVE COMMITTEE TO THE TRADE.

THE Executive Committee of the United Society of Chemists and Druggists have the gratification of publishing the accompanying list of subscriptions received from the trade towards the Incorporation and Defence Fund. They also have pleasure in acknowledging the many kind expressions of confidence they have been favoured with, and also beg leave to thank the trade for the very important suggestions they have received in reference to their proposed Act of Incorporation.

The opposition that has been made by the United Society on behalf of the trade against the threatened new Medical Bill, has, no doubt, frustrated the further progress of this unjust aggression; but until an authoritative announcement is made that the Bill has been abandoned, the Executive deem it right not to relax in their exertions to secure a formidable organization against it.

With regard to future legislation to procure an Act of Incorporation, the Executive Committee feel that they are called upon to make a full and frank avowal of their policy. They had intended to have delayed the introduction of this measure until the re-assembling of Parliament, which would have enabled them to have economized their strength and avoided the hasty legislation inseparably connected with a closing session, while it would have given them the advantage of receiving the matured judgment of the trade in reference to the measure. The recent proposition for an immediate Bill for regulating the qualification of Chemists and Druggists by the Pharmaceutical Society, may, however, somewhat alter this desirable arrangement, in which case the Executive Committee of the United Society will only be governed by the interests and wishes of the entire trade.

In reference to the Bill introduced by the Pharmaceutical Society, unmistakable evidence has already been received

from the trade that it is not either calculated to preserve their interests or improve their position. The principal objections being—

1. The invidious distinction that is sought to be perpetuated between equally qualified and respectable members of the trade.

2. The unlimited power that is claimed by the Pharmaceutical Council to govern all future interests while refusing to give any voice or representation, except by the degrading condition of passing the "Minor Examination."

3. The total absence of any provision for securing local government or local boards of examination, which, although simple and economical in their arrangement, would secure the practical knowledge required. The consequent retention of the present expensive and almost prohibitory form of examination of the Pharmaceutical Society which violates the first principle of commercial freedom in placing unnecessary obstacles to public requirements.

4. The danger that will ensue to existing interests in subjecting the evidence of qualification and future government to the "satisfaction" of the Registrar of the Pharmaceutical Society without any appeal, except to Council of said Society. See Secs. 8 & 9.

5. The unnecessary interference of a medical practitioner that is required by Schedule C.

6. The great injustice to all assistants under the age of twenty-one years.

7. The establishment of a Benevolent Fund, claiming to be for the advantage of all, but denying the trade any participation in its management.

8. That the Bill thus proposed would be totally inoperative in removing the great scandal of unqualified members of the trade by allowing the sale of poisons and powerful medicines to anyone, provided they did not call themselves Pharmaceutical Chemist, or Registered Chemist and Druggist.

The foregoing are some of the most important objections of the trade to the proposed Bill of the Pharmaceutical Society, but it also contains other mistakes that would be fatal to its proper incidence and administration.

In making these observations, the Executive Committee of the United Society are actuated by the wish to fearlessly and honestly express their own convictions and what they know now to be the views of the trade, and they are sorry that the Pharmaceutical Society are pressing forward a bill so full of crude propositions into Parliament, the consideration and support of which has hitherto been confined to their own members.

In promoting a Bill that shall avoid these objections, which they trust will be framed with a view to injure none, and for the benefit of all, the Executive Committee feel that they will be protected from the charge of making any factious opposition, the more especially when it is remembered that the Council of the Pharmaceutical Society rejected the recent proposition of the Executive Committee of the United Society for a Conference to take into mutual consideration an Act of Incorporation that should be based upon a recognition of existing interests, a representation securing the independent self-government of the trade, a power of future reform, and a reservation to the members of the Pharmaceutical Society of all their chartered privileges. In thus refusing this offer of friendly and cordial co-operation, the Council of the Pharmaceutical Society have done their utmost to delay the object of their founder, namely, "The union of the Chemists and Druggists into one ostensible, recognized, and independent body," at the same time destroying their only chance of securing legislative operation.

In conclusion, the Executive Committee of the United Society wish to convey to their friends, and especially to their country members, the great encouragement they feel by the kind aid they receive in carrying out the great responsibility of forming and consolidating a large organization, thoroughly representing the wishes and interests of the entire trade.

The ANNUAL DINNER on behalf of the BENEVOLENT FUND is appointed to take place early in June next, due notice of which will be given. In the meantime, the Executive Committee will be glad to hear from gentlemen who are willing to act as Stewards on the occasion. Gentlemen's Tickets, 7s. 6d.; Ladies' Tickets, 6s. each.

SHEFFIELD.

A very important meeting of the members of the United Society of Chemists and Druggists, and of the trade generally, was held at the King's Head hotel on Tuesday evening, the 19th ultimo, the immediate object being to consider the New Pharmacy Act as proposed by the Pharmaceutical Council. Amongst the gentlemen present were Messrs. Hornby, Dobbs, Huddleston, Maw, Newham, Huddleston, jun., Jepson, &c.

Mr. J. T. Dobbs, on being unanimously appointed to the chair, observed that the business upon which they were called together affected the vital interests of the whole body of chemists and druggists, and he trusted that the meeting would discuss it with that calmness and impartiality which its importance deserved.

Mr. Buott, Registrar of the United Society, said that he had special instructions from the Executive Committee to invite the Sheffield Association to pronounce a judgment upon the New Pharmacy Bill, as proposed by the Pharmaceutical Council. He then read the fifteen heads of the proposed measure, observing that each head should have its due share of consideration. Mr. Buott further remarked, that as the Executive Committee had instructed him to receive and to communicate to them whatever judgment the chemists and druggists of Sheffield formed upon the Bill, he felt it his duty to abstain from any comment of his own which might bias their opinions; more especially as Sheffield would sound the key note for other associations, and the Executive Committee would be guided by the judgment of the trade. At the suggestion of the chairman the heads were read a second time, and discussed consecutively. A lengthened discussion then ensued, and after each gentleman present had been invited to favour the meeting with his views, on the motion of Mr. Hornby, seconded by Mr. Huddleston, it was resolved:—

"That in the opinion of this meeting the proposed Pharmacy Act of the Pharmaceutical Council is degrading to the chemists and druggists of the kingdom, and totally inadequate for the purposes for which it is introduced. It therefore urges upon all local associations of the trade to combine in strenuous opposition to it, and in support of the Act of Incorporation, as suggested by the United Society of Chemists and Druggists, upon the broad basis of equal rights and a representative government."

This resolution having been unanimously adopted, Mr. Dobbs observed that the duties and responsibilities devolving upon the Executive Committee were becoming exceedingly onerous, and it was of the highest importance for the interests of the Society that they should be encouraged and their hands strengthened at the present time, not merely by the pecuniary support, but by the deliberately expressed confidence of the trade. He moved:—

"That this meeting unanimously expresses its confidence in the ability and integrity of the Executive Committee and officers of the United Society of Chemists and Druggists."

Mr. Hornby after a few complimentary remarks in favour of the Executive Committee, seconded the motion, which received the enthusiastic adoption of the meeting.

It was next resolved, on the motion of Mr. Huddleston, seconded by Mr. Newham,

"That Messrs. Hudson, Dobbs, Perry, and Newham, with power to add to their number, be a committee, to wait upon every chemist and druggist in the town to solicit subscriptions in aid of the Incorporation and Defence Fund of the United Society."

A general opinion was expressed that the important responsibilities now devolving upon the Executive Committee of the United Society rendered it expedient for the extension of that committee numerically, so as to include the provincial element in its deliberations. An opinion was also expressed that the annual festival of the Society should be occasionally held at one or other of the large towns in the provinces, and in connexion with these opinions it was generally thought reasonable that in return for the privilege of free local government each local association should guarantee to the executive of the society 5s., as the annual fee of each member, in accordance with the minimum subscription fixed at the commencement of the Society.

A vote of thanks to the chairman closed the proceedings.

BRADFORD.

The meeting held at the Talbot Hotel, on the 22nd ult., was both numerous and important, as representing the intelligence and respectability of the trade in connection with the United Society of Chemists and Druggists in the large town of Bradford.

Amongst other gentlemen present were Mr. Harland, Mr. Boast, Mr. Stead, Mr. Newsholme, Mr. Raper, Mr. Branson, Mr. Waddington, &c., &c. Mr. Buott, the Registrar of the United Society, and Mr. Aldridge, the Secretary of the Leeds District Association of that Society, were also in attendance.

Mr. Harland, being very cordially appointed to the chair, opened the proceedings by expressing the interest he felt in the success of the Society. He had always been desirous that a good understanding should exist between the medical body and the druggists, and was glad to hear that the Medical Bill was withdrawn, because it interfered too much with the rights of the trade. It appeared that Mr. Buott's mission was to ascertain, for the guidance of the Executive Committee, the views of the trade in relation to a Pharmacy Bill which was to be brought into Parliament. He (the chairman) was of opinion that the trade sadly needed reform, and would gladly accept any measure most likely to accomplish it. He recommended the meeting to hear all that might be said with patience, and trusted they would be of one mind, so that their union of judgment and effort might give strength to their common cause.

Mr. Buott congratulated the meeting upon the victory which had been achieved by the United Society over the Medical Council. The United Society had fought the battle alone, and to the United Society alone the trade was indebted for freedom from medical control. The trade in Bradford had signified, through Mr. Boast, the secretary of their local association, a desire to express their judgment upon the important question of their incorporation, and the Executive Committee had authorized him to hear and to report their opinions without prejudice. Indeed, he was there representing the Executive, not as the exponent but as the recipient of the opinions of the trade. The first thing they had to do was to consider the New Pharmacy Bill of the Pharmaceutical Council. If the trade approved of that Bill, it would be the duty of the Executive Committee of the United Society to aid the Pharmaceutical Council in promoting its success in Parliament; if, on the other hand, the trade rejected it and preferred a measure of their own, then clearly it would be the duty of the Executive Committee to bring that measure before Parliament. Mr. Buott having read the heads of the proposed Pharmacy Bill, they were duly considered; and suggestions then arose upon the headings of an Act of Incorporation, which it was thought would be generally approved of by the trade.

Mr. Boast reminded the meeting of the utter indifference manifested by the Pharmaceutical Council to the interests of the trade, until the zeal and activity of the United Society had roused them to action. From being enemies they had professedly become friends, but he doubted the sincerity of such a sudden conversion. The Pharmaceutical Council stood aloof, whilst the struggle between the Medical Council and the United Society was doubtful; but when the victory was gained by the United Society, they then said—"we are your friends; we cannot be uninterested spectators; put yourselves in our hands, and we will bring in a Bill upon the principle of the Apothecaries' Act of 1815, which will place you upon an equality as chemists and druggists, and respect your rights as tradesmen." That was plausible enough, but had the Council fulfilled their promise? The Bill was produced at a meeting with closed doors; the liberal members of the Pharmaceutical Society did their best to make it acceptable to the trade, but intolerance prevailed. He (Mr. Boast) had no faith in a measure so originated, and would move—

"That the proposed Pharmacy Act, whilst placing all chemists and druggists under the control of, and making them tributary to the Pharmaceutical Council, offers them no adequate privilege in return; that it provides no representative government for so large and intelligent a body; and that being based upon the assumption that a non-examined chemist is inferior to a non-examined pharmacist, it is essentially unjust, and shall have the strenuous opposition of this meeting."

Mr. Stead seconded the resolution, and observed that the monster evil of the trade was the facility with which the most ignorant and unqualified people could sell drugs. It was notorious that in Bradford hucksters of the lowest class, who knew not one drug from another, dealt in poisons of the most dangerous character. This was the evil of the trade, which had been left untouched by the Pharmaceutical Council, and which the United Society was labouring to remove. The Pharmacy Bill did not touch it, on the contrary, it left the thousands of hucksters in Bradford and all the large towns to traffic in deadly poisons, to the danger of life, and to the injury and scandal of the educated chemist. What was the use of such a Bill? He (Mr. Stead) fully agreed with Mr. Boast that, instead of the Bill being based upon the principle of equality, it drew an invidious distinction between one chemist and another, and fixed upon one of them the badge of legal inferiority. He should certainly oppose it. He was glad to find that the Medical Bill had been withdrawn, a result to be traced in a great measure to the opposition of the United Society. He trusted that the efforts of that Society would bring about the incorporation of the trade and thus benefit the public generally. The trade ought to give their full support to the Executive Committee who were working to improve the status of the chemist and druggist. He believed that the time would come when there would be unity and good feeling amongst all interested in the supply of medicines.

Mr. Aldridge, after pointing out the advantage of complete organization and frequent meetings to promote the objects of the Society, moved :—

"That the suggested measure of the United Society of Chemists and Druggists is just in its provisions and liberal in its government; that it is calculated to protect the public from incompetent druggists, and to elevate the trade; and this meeting now pledges itself to promote subscriptions in aid of the Incorporation and Defence Fund now being raised to bring that measure in the form of a Bill before Parliament."

Mr. Newsholme, in a few appropriate words, seconded this resolution, which was also carried unanimously.

Mr. Raper moved, and Mr. Stead seconded a further resolution :—

"That this meeting resolves itself into a committee to canvas the town that every chemist and druggist may have an opportunity to contribute to the fund."

Mr. Branson and other gentlemen spoke warmly in favour of present action, and this resolution having passed the meeting with enthusiastic accord, several gentlemen set down their names for handsome sums, and a day was appointed on which the Committee was to meet and organize the canvas of the town.

A vote of thanks to the chairman closed this very satisfactory meeting.

HULL.

On Wednesday evening, the 27th instant, a number of the influential members of the Hull Branch of the United Society of Chemists and Druggists met together at the Royal Station Hotel to express and record their opinions respecting the comparative merits of the proposed extended Pharmacy Act of the Pharmaceutical Society, and the intended Act of Incorporation of the United Society of Chemists and Druggists.

The utmost cordiality pervaded the meeting, and the proposals of the Pharmaceutical Society were denounced as being not only inadequate to meet the requirements of the trade in general, but also as being grossly insulting to all who have not hitherto associated themselves with that body. The outline of the Act of Incorporation, proposed by the United Society, met with unanimous approval, and the following resolutions were carried without a dissenting voice :—

"1st. That this meeting has full confidence in the Executive Committee, and pledges its aid towards the Incorporation Fund.

"2nd. That this meeting is of opinion that the proposed amended Pharmacy Act of the Pharmaceutical Society is thoroughly unjust to the chemists and druggists generally, and therefore determines to oppose it to the best of its ability.

"3rd. That this meeting decidedly approves of the proposed Act of Incorporation now laid before the meeting, and determines to support it in all its stages.

"4th. That the town be divided into four districts, and that

the chemists and druggists be canvassed at the earliest opportunity for subscriptions towards the Incorporation Fund.

"5th. That the thanks of this meeting be presented to Mr. C. Buott, the General Registrar of the United Society, for his attendance, and explicit information afforded by him.

"6th. That the thanks of this meeting be presented to Mr. H. Gates for his conduct in the chair."

Mr. E. Allison, of the firm of E. and H. Allison, at once headed the subscription list with one guinea, and promised to repeat his contribution if it should be found needful. Nearly all the members present paid their subscriptions, and a very respectable sum was realized. In accordance with the fourth resolution all the chemists and druggists who were not present will be waited upon, and no time will be lost in remitting to the Executive Committee the amount of subscriptions.

NOTTINGHAM.

A meeting of the United Society took place at the Maypole Hotel, Nottingham, on Friday, the 29th April, to consider the New Pharmacy Act; Mr. G. H. Dann in the chair.

Mr. Buott, the Registrar of the United Society, stated that the Executive Committee were wishful to know the views of the chemists and druggists of Nottingham upon the Pharmacy Bill which the Pharmaceutical Council proposed to bring into Parliament. He had special instructions to leave the trade to be its own interpreter in relation to this Bill. If they approved of it, and their approbation accorded with the judgment of the majority, the Executive Committee would aid to the best of their ability to get it through Parliament; but should they prefer a Bill, the outline of which he would lay before them, he trusted that the Committee, supported by the wishes and united efforts of the trade, would secure the measure of their choice. In compliance with the wishes of the meeting the heads of the Pharmacy Bill were read over and separately discussed. Several objections were taken to them, but the attention of the meeting seemed to concentrate upon the inequality which the Bill sought to establish between equally deserving chemists in favour of the members of the Pharmaceutical Society, as being calculated to perpetuate animosities in the trade, which it ought to be the desire of all to allay and forget. Every gentleman present, both pharmaceutical and non-pharmaceutical, concurring in this judgment, it was embodied in the following resolution, which was moved by Mr. Parker, and seconded by Mr. Patchett :—

"That in the opinion of this meeting the proposed Pharmacy Bill is not adapted to the requirements of the trade."

Mr. Buott then read the headings of a Bill for the incorporation of the trade, which, he said, if the trade generally approved of it, would be adopted by the Executive Committee, with such alterations and improvements as further deliberation might suggest, and constitute instructions for a Bill in Parliament. An interesting conversation ensued, and a general desire was expressed that copies of this proposed Bill should be printed without delay.

Mr. Squire then moved—"that this meeting approves of the principles and objects of the measure now proposed for the adoption of the trade."

Mr. Axe having seconded it, this resolution was passed unanimously.

How is this Bill to be conducted to a successful issue in Parliament? became the next question for consideration. A very cheering statement of the progress of the Incorporation and Defence Fund was given, and but one opinion pervaded the meeting upon the necessity for a prompt and simultaneous effort to be made for the minimum sum of £500 to be placed at the disposal of the Executive Committee, that no time might be lost in bringing the Bill so generally approved into Parliament. Mr. Oakland kindly promised to head the Nottingham subscription list to the Incorporation Fund with one guinea, and every gentleman in the room intimated his intention to subscribe. The meeting then resolved itself into a committee to canvas the town, and closed with a vote of thanks to the chairman.

LEEDS.

Mr. Buott, having to attend meetings of the trade at Sheffield, Bradford, and Hull, availed himself of the opportunity to visit Leeds, where he had a very satisfactory and gratifying interview with the Committee of the Leeds District Association, which resulted in the following Resolution :—

"That this Committee have full confidence in the Executive Committee, and promise to aid in the Incorporation Fund."

INCORPORATION AND DEFENCE FUND.

Treasurers.

JAMES BURGOYNE, Esq. | ALFRED PRESTON, Esq.

	£	s.	d.		£	s.	d.
Bradbury, Thomas G., Leek, Life Governor	5	5	0	Chapman, George, Brierley-hill, Staffordshire	0	5	0
Pridmore, Thomas, Hinckley, ditto	5	5	0	Caird, Alexander, Bristol	0	10	6
Aveling, Henry, Whittlesea	0	2	6	Cantrell, William, Elland, Yorkshire	0	2	6
Allen, H. and Co., Aldershot	0	5	0	Crawshaw, Edward, Burnley	0	5	0
Aslin, Richard, Chorley	0	5	0	Cook, Joseph, Chapel-in-le-Firth	0	5	0
Ashford, A., Honiton Clist, near Exeter	0	5	0	Collings, James, Littlehampton, Sussex	0	5	0
Adam, F. W., East Dereham	0	10	0	Chappell, John, Boston Spa, Yorkshire	0	2	6
Ambler, William, Market Weighton	1	1	0	Crompton, Robert, Chorley	0	5	0
Anderson, John, Ripon	1	1	0	Crookes, James, Belper	0	5	0
Atkinson L., Warcop, Westmoreland	0	1	0	Cartwright, Thomas S., Uttoxeter	0	10	6
Allenby, E., Caledonian Road	1	1	0	Cox, Samuel, Maidstone	0	10	0
Armstrong, William, Langholme, N.B.	2	6		Clough, John, Norwich	1	1	0
Ayre, George, Thirsk, Yorkshire	1	1	0	Clarke, George Bowdler, Woburn	0	5	0
Atkins, O. J., Heathfield, Moss Side, Manchester	1	0	0	Cowper, Mathew, Delph, Saddleworth	0	5	0
Ashford, H., Deptford	0	10	0	Cadd, William, Bideford	0	10	6
A Friend to Pharmaceutical Education	2	2	0	Coleman, Friend, Forest Hill	1	1	0
Ablitt, Benj., Hackney	1	1	0	Chalmers, Henry, Newport, Salop	1	1	0
Alexander, Wm. B., Huntingdon	1	1	0	Cull, Edwin, Cheltenham	1	1	0
Atkisson, Samuel, Heckmondwike	0	10	0	Cotton, John, St. Helen's-lane	1	1	0
Allen and Wells, Kiugs Lynn	0	10	6	Cottingham, J. J., Norwich	0	5	0
Bradley, Tho., Dunstall, Brighton	0	5	0	Crawford, William, Girvan	0	15	0
Ball, E., Buxton	0	5	0	Christian, William, Richmond, Yorkshire	0	5	0
Brown, T., Abbots Bromley	0	5	0	Clarke, Joseph, Swinton, near Rotherham	1	1	0
Bygott, Wm., T., Huddersfield	0	5	0	Crook, Charles, Waterloo, near Liverpool	0	5	0
Balk, Wm., Lowgate, Hull	0	10	0	Carlton, W. P., Horncastle	0	10	6
Barnby, Henry, Rochester	1	1	0	Cox, Henry, Strutton-ground, Westminster	0	5	0
Brooke, T. M., Dewsbury	0	5	0	Clarke, James, Burton-on-Trent	1	1	0
Bateson, Thomas, Kendal	1	1	0	Clifton, George F., Bury	0	5	0
Bush, Thomas, Paulton, near Bristol	0	2	6	Cryer, Henry, Colechester	0	1	0
Brown, Alfred James, Greenwich	0	5	0	Cadby, J. P., Margate	0	2	6
Bingham, Wm. H., Eton	1	1	0	Cawdell, George, Paddington	1	1	0
Bunn, Abraham H., Stratton St. Mary	1	1	0	Coverley E. C., Thayer-street, Manchester-square	1	1	0
Beal, Edmund John, Ilford, Essex	0	5	0	Congreve, G. J., Peckham	1	1	0
Pateman, Thomas, Portsea	0	10	0	Cripps, Johnson, Reepham	0	10	6
Beecham, Thomas, St. Helens	1	0	0	Cookshott, William, Bradford	0	10	0
Bray, William, Buntingford	0	5	0	Cookson, Joseph, Bradford	0	5	0
Blankley, William, Arnold, Notts.	1	1	0	Dove, John, Sherburn, Milford	0	5	0
Bully, W. H., Exeter	0	5	0	Dixon, Frederick, Ash next Sandwich	0	10	0
Blundell, John, Liverpool	0	10	6	Dixon, William, Ash next Sandwich	0	5	0
Bush, Thomas, Paulton	0	7	6	Dennis, John, Brighton	0	2	6
Biker, Charles G., Margate	0	2	6	Dodwell, John, Cheltenham	0	5	0
Baker, Arthur G., Margate	0	2	6	Davies, J. R., Carmarthen	0	1	0
Barlow, Joseph, Stourbridge	0	5	0	Ditchfield, Thomas, Chorley	0	5	0
Blunden, Frederick, Basingstoke	0	5	0	Denbigh, L., Burnley	1	1	0
Brown, John, Ripon	1	1	0	Driver, T., Woolton, Liverpool	0	2	6
Brown, Joseph James, New Peckham	0	5	0	Dickinson, James H., Huddersfield	1	1	0
Brown, William, Newbiggin-by-Sea	0	5	0	Dingle, Edward, Bideford	1	1	0
Bull, B., North Brixton	0	10	0	Dunn, Daniel, Scooter	0	5	0
Bates, Henry, Oldham	0	10	0	Dawson, John, Dudley	0	5	0
Buckham, John, Leominster	0	5	0	Develly, Robert, West Malling	0	3	0
Burgess, Richard, Winsford, Cheshire	1	1	0	Duncalf, Richard, Manchester	0	10	0
Beall, George, Cambridge	0	10	0	Dearden, William, Keighley	0	4	0
Baily, G. W., North Walsham	0	10	0	Davis, David Jenkin, Aberystwith	1	0	6
Bird, William, Monkwearmouth	0	5	0	Denniston, J., Wakefield	0	2	6
Birch, A., West Bromwich	0	2	6	Davis, Samuel F., Seven Sister's-road, Holloway	1	1	0
Bulmer, R. P., Pecklington	0	5	0	Dobb, Joseph T., Sheffield	0	5	0
Bradbury, Charles, Lytham, Lancashire	0	5	0	Duffield, Thomas, Spilsby	0	5	0
Branson, John, Rotherham	0	5	0	Dodds, George F., Kelso, Scotland	1	1	0
Blackmore, J. J., Plymouth	0	5	0	Douglas, J. P., Lockerby, N. B.	0	5	0
Boor, George, Bi-hopgate-street Without	1	1	0	Doble, H. T., Tavistock, Devon	0	5	0
B-sley, J. L., Brompton-road	1	1	0	Davies, Edward, Ruabon	0	5	0
Burn, D. Hastly, Ayrbroath	0	10	0	Dunn, H. T., Southmolton	0	10	6
Baker, Robert William, Nottingham	0	15	0	Dunn, John, Selkirk	0	5	0
Bartlett, Henry N., Colyton, Devon	0	5	0	Danbey, Thomas, Sheperdess Walk	1	1	0
Bartlett, Henry Junr., Colyton, Devon	0	10	0	Dawson, William, Colchester	0	2	6
Batchelor, G. F., Newington Butts	1	1	0	Dale, Arthur, Leeds	0	10	0
Bennett, T., Penze	1	0	0	Dodds, Nicholas, Coldstream	0	10	0
Braynd, A. W., Cambourne	1	1	0	Dey, William, Bradford	0	10	0
Bache, Joseph, Pensnett	0	10	0	Elliott, J., Liverpool	1	1	0
Brookes, Samuel, Lissou Grove	1	1	0	Elvin, G., Goole, Yorkshire	0	10	0
Bernardini, M. de, Titchbourne Street	1	1	0	Evans, William, Dartmouth	0	5	0
Barrowelough, A., Mirkeld	1	1	0	Exley, George, Leeds	0	5	0
Bateson, Thomas, Strangeways, Manchester	0	5	0	Ekeus, J. William, Wimbledon	0	2	6
Butler, Erasmus, Pontefract	0	10	0	Evans, Thomas, Swansea	0	5	0
Byrrett, Thomas G., Iichester	1	1	0	Elder, William, Helensburgh, N. B.	0	2	6
Biff-n, Thomas, at Mr. Woods, Chichester	0	5	0	Evans, A. W., Bishop Auckland	0	2	6
Bradbury, Thomas G., Leek	5	5	0	Ely, George, Bingham	0	5	0
Burn, Thomas, North Shields	0	5	0	Ellis, Richard, Thornbury, Gloucestershire	0	5	0
Bownas, Robert, Boston Spa, Yorkshire	1	1	0	Edisbury, James Fisher, Wrexham	0	10	6
Burt, George Edward, Westminster	0	10	0	Eatock, Charles, Hindley, Lancashire	0	10	0
Bennett, Thomas, Loughborough	1	1	0	Ellis, James, Shelton, Poteries	0	5	0
Bell, George, Hexham	0	10	6	Evans, Thomas, Fishguard	0	5	0
Beck, G., Ashburn	0	5	0	Edwards, William and Son, Wellington Salop	1	1	0
Baumgarten, Adolph, 520, New Oxford Street	1	1	0	Fisher, Charles, Ramsgate	1	1	0
Beanland, Samuel, Bradford	0	5	0	Fisher, Henry Augustus, Ramsgate	0	10	6
Boast, John, Bradford	0	10	0	Fisher, Frederick, Ramsgate	0	10	6
Caswell, C., Leamington	0	5	0	French, Gabriel, Chatham	0	5	0
Christion, G., Godalming	0	10	0	Fletcher, Thomas, Norton-in-the-Moors, Burslem	0	5	0
Cooper, S., Cannock	0	10	0	Forster, John Robert, Blyth	0	5	0
Candler, T. T., Margate	0	7	6	Farrer, John, Loughborough	0	5	0
Croft, George, Wandsworth	0	5	0	Fairs, Joseph, Newcastle-on-Tyne	1	1	0
Crosse, H. A., Kensington Park, W.	1	1	0	Freevan, Thomas W., Ledbury	0	5	0
Corder, E. P., Stepney	0	1	0	Frank, J. M., Liverpool	1	1	0
Chignell, Alfred, Wingham	0	5	0	Floyfield, John Edward William, Thame, Oxfordshire	0	5	0
Co'e, Frederick, Colchester	0	5	0	Floyd, J., Yarmouth	0	2	6
Capper, Edmund, Bath	0	5	0	Forsey, J. S., Chard	0	5	0
Coates, Alfred, Baslow, by Chesterfield	0	2	6	Forrest, John C., Sheffield	0	5	0
				Farr, James, Halifax	0	10	0
				Finland, William, Thornhill, N. B.	1	1	0
				Field, Jonathan, Mr. Hawkins, Southampton	0	2	6
				Foster, Joseph, Collumpton	0	10	6
				Fitch, Robert O., Hackney-road	1	1	0
				Foster, George, Hampstead-heath	0	10	0

	£	s.	d.		£	s.	d.
Fletcher, J. B., Totton, near Southampton	0	10	0	Knight Brothers, 30, Crown-street	0	5	0
Firth, Alfred, Bradford	0	2	6	Kain, Joseph, Berrymondsey	1	1	0
Foster, James, Bradford	0	5	0	Keyworth, George Alexander, Hastings	0	10	0
Foster, James, (Annual), Bradford	0	5	0	Knowles, Henry, Birstall, near Leeds	0	2	6
Faull, John, Bradford	0	5	0	Knowles, William, Mexbro', Rotherham	0	5	0
Gunn, John, Hambledon, Haunts	0	2	6	King, George H., Birmingham	1	1	0
Griffin, Henry S., Bourton-on-the-Water	0	10	0	Keeling, Henry, Epsom	0	5	0
Greenwood, John G., Brigg	0	5	0	Kornblan, Islington	0	2	6
Grundy, Dennis, Bury	0	5	0	King, William, Solihull	0	10	0
Gillett, Crabb, Peas-hill, Cambridge	0	10	6	King, Henry, Pulitico	1	1	0
Gill, Benjamin, Farrar, Bradford	0	5	0	Lacey, E., Hounslow	0	1	0
Gibson and Son, Hexham	0	5	0	Lonsdale, C., Trowbridge	0	10	0
Gornall, Henry, Chorley	0	5	0	Lang, W., Sydenham	2	2	0
Gostling, John Henry, Halesworth	1	1	0	Lees, Thomas, Epping	0	2	6
Garland, J. T., Marshfield, Chippingham	1	1	0	Lloyd, E., Oxtou, Birkhead	0	5	0
Griffith, James, Newport, Pembrokeshire	0	2	6	Leigh, John J., Bishop Auckland	1	0	0
Gooch, Henry Wyard, Framingham	0	2	0	Luna, Aubrey, Chesham	1	1	0
Gooch, W. T., Framingham	0	2	6	Lee, William, at Mr. Lum's, Chesham	0	5	0
Glynn, William, Torquay	0	5	6	Lenmon, R. A., Yalding, Kent	1	1	0
Griffith, Thomas, Bideford	0	10	6	Lonsdale, Henry, Accrington	0	5	0
Guitsell, James, Gosforth, near Whitehaven	0	5	0	Lumley, William F., Kirkbymoorside	0	5	0
Guest, Joseph, Wigan	0	10	0	Leggott, William, Goole, Yorkshire	0	10	0
Gibson, John Brewster, Grantham	1	1	0	Lafire, Edmund H., Hatherleigh	0	5	0
Gooch, J. P., Leiston, Suffolk	0	10	0	Lawrance, Philip, Welwyn, Herts	0	5	0
Green, West Bromwich	0	5	0	Lent, George, Rotherham	1	1	0
Gibbs, Morris A., Yoxford, Suffolk	1	1	0	Le Sueur, Philip, Charing, Jersey	0	5	0
Gilbert, Samuel, Sandbach	1	0	0	Lander, Henry, Rugby	1	1	0
Griggs, Walter (J. Marlar's), Halstead	0	2	6	Livesley, Alfred, New Mill	0	5	0
Gabriel and Troke, Moorfields	0	5	0	Lakeman, Nicholas, Mordbury, Devon	0	5	0
Grayson, Joseph, Whitehaven	0	5	0	Lister, James E., Wolverhampton	0	5	0
Hazledine, J., Walsall	0	5	0	Lloyd, Henry, Deptford	0	2	6
Hall, Samuel, Eastbourne	0	2	6	Lockyer, George, Deptford	0	2	6
Harland, John, Bradford	0	2	6	Langford, John B., Wellington, Somerset	0	10	0
Hall, Richard, Castle Hedingham	0	5	0	Loane, John, Dock-street	1	1	0
Hammerton, Edward, Colchester	1	1	0	Linder, Charles, 104, Strand	1	1	0
Hickey, Evan Lewis, Chelsea	0	5	0	Mercer, T. W., Rochdale	0	2	6
Hawkins, John C., Hawick	0	10	0	Miller, C. S., Peckham Rye	0	10	6
Huggins (at C. U. Jenner's), Hailsham	0	4	0	Mann, W., Birstall, near Leeds	0	2	6
Hunter, James, Dewsbury	0	10	0	Macarthy, C. J., Romford	1	1	0
Harvey, William B., Frome	0	5	0	Middleton, William Henry, Bradford	0	2	6
Hindle, Henry, Whalley Banks, Blackburn	0	5	0	Miller, C. B., Blackheath	0	10	6
Holmes and Tomlinson, Birmingham	0	10	0	Moulton, Joseph, Castle Donington	1	1	0
Harrington, Allen, Needham Market	0	7	6	Miller, Jephtha, Saffron Walden	0	10	0
Hughes, Edwin, Llanelli	0	5	0	Miller, John, Saffron Walden	1	1	0
Howard, James H. H., Northbleach	0	5	0	Matthews, Simon, Lechlade	1	1	0
Huxham, Thomas, Dartmouth	0	10	6	Maltby, Joseph, Lincoln	0	5	0
Hindle, W., Accrington	0	1	6	Moss, John, Chorley	0	5	0
Hearder, William, Torquay	1	1	0	Moore, Richard, Ossett, Yorkshire	0	1	0
Hay, David, Burnley	1	1	0	Miller, Thomas, Birmingham	0	1	0
Hogg, Thomas, Bideford	0	2	6	Miller, J. J., Birmingham	0	2	0
Hodgkinson, Shrewsbury	0	5	0	Mullenger, Henry, Debenham, Suffolk	0	2	6
Hawkins, Thomas, Southampton	0	10	0	Mary, William, Ilkerton	0	2	6
Harland, John, (additional), Bradford	0	2	6	Millidge, William Henry, Newport, Isle of Wight	0	5	0
Hardy, Joseph (at Mr. Gilbert's), Altrincham	0	5	0	Mortimer, John, Sidmouth	0	2	6
Harris, C. J., Crewkerne	0	5	0	Mills, William Dun, Sidmouth	0	5	0
Herron, Frederick, Plymouth	0	5	0	Moore, William, Stradbroke, Wickham Market	0	5	0
Hetherington, A. H., Plymouth	0	2	6	Mills, Robert, Rochdale	0	5	0
Habgood, C., Wells, Somerset	0	2	6	Merryweather, Charles, Turnham Green	1	1	0
Hayward, William H., Trowbridge	0	5	0	Morris, John, Worcester	1	1	0
Hillidge, George, Preston	0	5	0	Markham, John, Rugeley	1	1	0
Hodgson, Robert, Sunderland	0	5	0	Mitchinson, George, Sunderland	0	5	0
Hamer, John, Wisbeach	0	5	0	Marger, W. D., Northampton	1	1	0
Hall, Thomas, Huddersfield	0	10	6	Miller, William, Wulaton, Blaydon-on-Tyne	0	5	0
Harburn, R. H., Bishop Auckland	0	10	0	Miller, William C., Birmingham	1	1	0
Hutchinson, H. W. C., Seaforth, near Liverpool	0	5	0	Moore, Joseph, Pembroke Dock	1	1	0
Hough and Hand, Grantham	0	5	0	Morris, William, at J. I. Jones, Milford Haven	0	2	0
Holt, Harie, Knaresboro'	0	2	6	Moody, A., Winchester	0	10	6
Halley, William, Leith	0	5	0	Mackay, G. B., Scouringburn, Dundee	0	10	6
Horne, Thomas, West Bromwich	0	5	0	Mackenzie, Thomas, St. Helens, Lancashire	1	1	0
Hole, James George, Watchett	0	5	0	Morris, A., Ollerton, Notts	1	1	0
Hole and Hollingsworth, Mansfield	0	5	0	Morris, Rupert, Lichfield	0	5	0
Holmes, John, Bradford	0	2	6	McCreath, J. M., Newton Stewart	0	5	0
Harris, Joseph, Northampton	0	10	0	Mackereith, H. W., Ulverston	1	1	0
Hall, F. J. (at Mr. Cook's), Norwich	0	5	0	Miller, Frederic, Hastings, Sussex	0	5	0
Hayles, James, Ealing	0	10	0	McGeorge, W., Lower-road, N.	0	5	0
Hayles, B. H., Ealing	0	10	0	Matthews, Edwin, Colyton, Kent	1	1	0
Hollingsworth, Charles Foster, Plymouth	0	5	0	Morison, George, Peebles	1	1	0
Hole and Hollingsworth, Mansfield	0	5	0	Mitchell, Walter, Bristol	0	10	0
Hatfield, G. B., Linehouse	1	1	0	Margetson, James, Bristol	0	5	0
Heppell, H., Tottenham-court-road	1	1	0	McCarthy, C. G., Cardiff	0	5	0
Hunt, James, Clerkenwell	1	1	0	Morgan, Frank Gaudion, Petworth	0	19	0
Haycock, H., City-road	1	1	0	Machon, Henry, Saffron Walden	0	5	0
Hunter, Thomas, North Shields	0	5	0	Newton, J. W., at Messrs. J. and E. Taylor, Bradford on Avon	0	5	0
Huggins, W. H., Wainfleet	0	10	0	Norrington, John, Barnstaple	0	5	0
Joce, James, Bideford	0	10	6	Nicholson, William Ostler, Brigg	0	5	0
James, J. R., Cardigan	0	4	0	Newbigin, J. L., Alnwick	0	5	0
James, Henry, Norwich	0	5	0	Newsholme, William, Bradford	0	10	0
Jarman, George, Bury, Lancashire	0	3	0	Newcome, John, Grantham	1	1	0
Jenner, C. U., Hailsham	0	10	0	Nichols, Henry, Petersfield, Haunts	0	10	6
Johnson, Frank, Barnsley	0	7	6	Nichols, Henry, Freck, Bradford	0	2	0
Johnson, Charles, Barnsley	0	5	0	Niblett, Mary Ann, Stroud	0	5	0
Johnson, Henry, Barnsley	0	2	6	Newton, John, Kenilworth	0	10	0
Jackson, J., Bawtry	0	1	0	New, Walter William, Lower-road, Islington	1	1	0
Jarman, Thomas, Chatham	1	1	0	Newman, Joseph, Essex-street, Islington	0	5	0
Jones, A. M., Brynmawr	1	1	0	Newnam, H. L., Theberton-street, Islington	1	1	0
Julian, W. H., Clifton, Bristol	0	5	0	Organ, Edward, Bristol	0	2	6
Jackson, William, Mansfield	1	1	0	Oldfield, Henry, Barnsley	0	2	6
Jones, Edwin, Ewins Harold, near Hereford	0	10	0	Oilidge, Robert, Frome, Somerset	1	1	0
Jones, J., Brecon	1	0	0	Oliver, John, Liverpool	0	5	0
Jones, Michael, Bagillt	0	2	6	Orchard, Herbert J., Newport, Isle of Wight	0	2	6
Jones, John Thomas, Milford Haven	1	1	0	Overton, J. S., Wells, Somerset	0	2	6
Jolliffe, J., Hackney-road	0	5	0	Oakley, Richard, Gornal Wood	1	11	0
Johnson, Frederick, Nottingham	0	5	0	Oldham, Peter, Oldham	0	9	5

	£	s.	d.		£	s.	d.
Oldham, John, Mansfield	0	5	0	Saunders, Paris Sweeting, St. Blazey	0	5	0
Ogilvie, George P., Arbroath	0	10	0	Samner, John, Cecheshill, Warwick	0	10	6
Opie and Son, St. Agnes, Cornwall	0	5	0	Snowdon, G. W., Wimbledon	0	5	0
Owen, Richard Lewis, Carnarvon	0	10	0	Snowden, F., Wimbledon	0	2	6
Oldham, John, Mansfield	0	5	0	Swift, Francis, Spalding	0	5	0
Overend, Henry, Bradford	0	2	6	Swinflatt, William Squire, Goolle	0	10	0
Parler, William, Bradford	0	2	6	Stedman, R. B., West Malling	1	1	0
Potts, Samuel, Mansfield	0	5	0	Squire, Benjamin, Quarndon	0	5	0
Potter, W. S., Plaistow	0	2	6	Spencer, William Henry, Burnham, Norfolk	0	5	0
Potter, Elizabeth, Plaistow	0	1	0	Smart, Nevil, Littlehampton	0	10	6
Potter, Charlotte P., Plaistow	0	1	0	Slater, Thomas, Stone	0	10	6
Pearce, J. S. D., Ashburton	0	5	0	Savidge, John M., Nottingham	1	1	0
Pilley, John and Samuel, Boston	1	1	0	Stevens, A. P., Hoxton	0	5	0
Peake, Robert, Charlton, Dover	0	2	0	Smith, J. T. S. (at Mrs. Unsworth's), Radcliffe-lane	0	2	6
Pickering, John, Crowle	0	10	0	Simco, Henry, Northampton	1	1	0
Pattinson, James S., Carlisle	0	5	0	Smith, Edward, Pateley-bridge	0	10	6
Pickles, William Thompson, Queensbury, Halifax	0	2	6	Simpkins, J., Minchinhampton	0	10	0
Parnell, Henry, Cardiff	0	10	6	Sansom, Edwin, Barrow-in-Furness	1	0	0
Pearson, Peter, Leyburn Bedale, York	0	2	6	Salter, T. C., Buckfastleigh	0	5	0
Pridmore, Thomas, Hineckley	5	5	0	Swaine, John, Bradford	0	5	0
Pridmore, William, Hineckley	1	1	0	Sharp, John, Bradford	0	5	0
Priestley, John, Bradford	0	5	0	Stead, Thomas, Bradford	0	10	0
Potter, H. J., Bradford	0	5	0	Stokes, T., 79, Kentish Town-road	0	10	6
Paget, J., Loughborough	0	10	6				
Potts, Richard Smith, Ilkeston	0	10	0	Tidman, W., Wormwood-street	2	2	0
Pennington, T., Bury	0	10	0	Taylor, J. and E., Bradford-on-Avon	1	1	0
Palmer and Son, Ramsey, Huntingdon	0	5	0	Townson, T. W., Bowdon	1	1	0
Pafford, Frank, Blackburn	0	5	0	Thornburn, Henry, Bishop Auckland	0	10	0
Pringle, George, Walthamstow	0	5	0	Taylor, Joseph H., Barnsley	0	5	0
Parry, John Henry, Swansea	0	1	0	Thompson, J. W., Sedgley, near Dudley	1	1	0
Prior and Son, St. Ives	2	0	0	Thurlo, Henry, Ixworth, Sussex	1	1	0
Powell, E. F., Winchester	0	10	0	Troake, William Henry, King's bridge, Devon	0	10	0
Picken, Thomas, Newport, Salop	0	5	0	Towler, William, Bedford, Leigh	0	5	0
Pains, A., New Romney	0	5	0	Thomas, John, Macclytheth	1	1	0
Plessey, R., Waterloo, Liverpool	0	5	0	Thompson, Edward, Thame, Oxfordshire	0	5	0
Prichard, Edward, Vigo St., Regent-street	1	1	0	Topless, E., Wainfleet	0	10	0
Pickup, John Charles, Blackburn	0	1	6	Thirby, Benjamin, Rugeley	1	1	0
Ponsford, James, Newton Abbott	0	10	6	Turner, W. M., St. Ives	1	0	0
Pirrie, George, Rothiemay, N. B.	0	4	0	Thurland, E. and Sons, Oxford	0	5	0
Pearce, Joseph, Crewkerne	0	5	0	Timms, Edwin, St. John's, Worcester	0	5	0
Potter, Jonathan, Dudley Grove, Harrow-road	1	1	0	Tabberer, W. F., Woolston, Southampton	0	5	0
Pryer, William S., Axminster	0	1	0	Taylor, Joseph, Crew	0	5	0
Pottage, William, Beverley	0	5	0	Thomas, G. J., South Moulton	0	10	6
Philpotts, Joseph, Blakeney, Gloucestershire	0	5	0	Thimland, Henry, Giles-road, Oxford	0	5	0
Paige, John Allen, Southmolton	0	10	6	Townsend, Charles, Esq., Frankfort villa, Cotham, Bristol	0	10	0
Philpotts, James R., Newnham, Gloucestershire	0	2	6	Thomas, Edward, Drury-lane	0	16	0
Page, J. H., Upper-street, Islington	0	5	0	Thomas, W. J., Bradford	0	2	6
Percy, Thomas B., Truro	0	10	6				
Parry, Hugh, Brynssoneyn, Anglesea	0	5	0	Van, F. W. S., Croydon	0	5	0
Potts, Samuel, Mansfield	0	5	0	Vachell, F., Hotwells, Bristol	1	1	0
Page, John, Page and Tibbs, Blackfriars	1	1	0	Vaughan, William, Fishguard	0	5	0
Quested, George, Margate	0	2	6				
Robertson, W., Commercial-road	1	1	0	White, Mr., Ashford	0	5	0
Robinson, C. J., Streatham	0	5	0	Westlake, W. C., Walworth	0	5	0
Rowland, F., Epping	0	10	0	Woy, William, Stonehouse	0	5	0
Reynolds, J., Chichester	1	1	0	Wyles, Benjamin, Bonn	0	2	6
Per ditto Mr. Baker	1	1	0	White, Joseph, Barnsley	0	2	6
" Mr. Pratt	1	1	0	Wickes, Charles, York Town, Farnley	1	1	0
" Mr. Rowland	1	1	0	Waddington, B., Thornton, Bradford	0	4	0
" Mr. Ryde	1	1	0	Wootton, Edward, at Mr. Candler's, Margate	0	5	0
" Mr. Woods	1	1	0	Watson, J. B., Chipping, near Preston	0	5	0
Read, Richards, Brighton	0	2	6	Welbourne, George, Boughton, near Faversham	0	5	0
Ratcliff, Samuel, Burton-on-Trent	1	1	0	Wood, Henry, Mr. Townson's, Bewdon	0	5	0
Rowden, James, Calne	0	10	0	Warrington, E. R., Bridge-end, Castleford	0	15	0
Ruston, Thomas, Maryport	0	5	0	Woodeck, T., Bury	0	5	0
Reeve, F. J., Newhaven, Sussex	0	5	0	Williams, T. H., Brynmawr	0	2	6
Read, W., Helmsley, Yorkshire	1	1	0	Williams, William, Colford	0	10	0
Ridgway, William Walker, Market Drayton	1	1	0	Wright, William, Burton-on-Trent	1	1	0
Roberts, J. Chidley, Dolgelly	1	1	0	Waters, T. S., Ridwelly	0	1	0
Rees, William Henry, Dartmouth	1	1	0	Whitehouse, George Henderson, Bradford	0	5	0
Robinson, J. Spencer, Alfreton	0	5	0	Williams, Thomas, Cardiff	1	1	0
Rowe, Sampson Taylor, Redruth, Cornwall	1	1	0	White, Edward A., Mayfield	0	10	0
Rose, Francis William, Chipping Norton	0	5	0	Waters, Josias Selby, Ridwelly	0	5	0
Rooke, Dr. W. F., M.R.C.S., Scarborough	1	1	0	White, Charles Thomas, Ashford	0	1	6
Roberts, John, Ratcliffe Bridge	1	1	0	West, Thomas, Stretford, near Manchester	0	5	0
Rickard, J. R., Wadebridge	1	1	0	Wright, Ann, Olney	0	5	0
Rippon, R. O., Berkhamsted, Hants	0	5	0	Wavell, Henry M., Newport, Isle of Wight	0	2	6
Raper, Joseph, Bradford	0	5	0	Wrigley, William, Werneth, Oldham	0	10	0
Rice, Reuben, Strickland, Leicester	0	1	0	Williams, T. S., Swindon	1	1	0
Remnards, J. R., Helensburgh, N.B.	0	10	6	Williams, F., Chester	1	1	0
Roebuck, Charles, Shipley	1	0	0	Worts, A., Harwich	1	1	0
Smith, H. J., Walsall	0	0	6	Wilson, Alexander Greaves, Oldham	0	2	6
Smith, C. S., Cirencester	1	0	0	Whittle, E. C. C., St. John's-wood	1	1	0
Smith, W., Cirencester	0	10	0	White, William, Oldham	0	5	0
Sanders, George, Reading	0	5	0	Weston, J., Fenton, Staffordshire	0	10	0
Storey, G., Lower-road, Rotherhithe	0	2	6	Wastie, Francis, Kennington-cross	0	2	6
Saunders, T. P., Bradford-on-Avon	1	1	0	Woodstock, Charles, at Mr. Hawkin's Southampton	0	2	6
Smith, Corbett, Bromsgrove	0	5	0	Ward, David, Chipping Ongar, Essex	0	5	0
Stedman, William, Ashford, Kent	0	5	0	Wilson, Richard, Clay Cross, near Chesterfield	0	10	6
Smith, J. H. and Co., Carmarthen	0	5	0	Whiteway, W. H., St. Mary Church, Torquay	0	10	0
Stafford, William, Gloucester	0	5	0	Wahpole, W., Great Yarmouth	1	1	0
Sadler, John, Gloucester	0	5	0	Wynn, Frederick Horsforth, Leeds	0	5	0
Spivey, Thomas Fish, Howden	0	5	0	Whitely, W. A., Bishop Auckland	0	2	6
Stott, William, Haslingden	0	5	0	Whitely, William, Plymouth	0	10	0
Sherlock, J., Tarpsey	1	1	6	Wilkins, W. R., Mr. Taylor's, Walthamstow	0	5	0
Strutt, E. B., Salford, Birmingham	0	2	0	Williams, Robert, Cambridge	0	5	0
Smith, John, Birmingham	1	1	0	Williams, J. A., Bradley Green, near Congleton	0	5	0
Simson, J. W., Maltstone	0	10	0	Wilson, Charles William, Uttoker	0	2	6
Shakerley, William A., Redruth	0	5	0	Williams, James, Nottingham	0	5	0
Sugden, Edward Samuel, Cleeke-ton	0	1	0	Wade, John, Westminster	1	1	0
Smith, Robert, Newport, Isle of Wight	0	2	0	Wells, Thomas, Belravia	1	1	0
Saunders, John Cornish, Bideford	0	10	0	Watson and Bridges, Richmond	0	5	0
Singleton, H., Winsford, Cheshire	1	1	0	Wakeman, Charles, Helston	1	0	0
				Waddington, John William	0	2	6

Yates, Thomas, Leicester	..	..	..	..	..	£	s.	d.
Yardley, Job, Mr. Highway's, Walsall	..	..	..	..	..	0	5	0
Young, Philip, Chelsea	..	..	..	..	..	0	5	0
Yolland, J., Ashburton	..	..	..	..	..	0	10	6
	..	..	..	..	..	0	5	0

This List will be continued.

N.B.—Want of space prevents the Committee acknowledging the kind subscriptions on behalf of the Benevolent Fund, as well as the four or five hundred membership fees that have accompanied the foregoing; they propose publishing these in their Annual Report.

ACCIDENTS.

POISONING BY STRYCHNIA.

On Saturday, April 16th, an adjourned inquest was held at Liverpool, relative to the death of Mr. John Lingard, a Liverpool tradesman. On the 11th of April, Mr. Lingard, having a cold, received a prescription from Dr. Nottingham; the prescription was for a powder consisting of James's powder and Dover's powder, and was made up at the shop of Messrs. Clay and Abraham, Bold-street. About half an hour after taking the powder, Mr. Lingard expired in great agony, the symptoms being those of poisoning by strychnia. A *post-mortem* examination of the body was ordered by the coroner, and the contents of the stomach were analysed by Dr. Edwards, who reported as follows:—

I am an analytical chemist, and lecturer on chemistry and medical jurisprudence at the Liverpool Royal Infirmary School of Medicine. On Wednesday last I received from Dr. Nottingham, in this court, four jars covered with bladder, tied, and sealed; these I conveyed to my laboratory, and examined in the presence of Dr. Nottingham and Dr. Smyth, and labelled their contents as follows:—No. 1, stomach, portion of duodenum, spleen, and heart; 2, liver; 3, blood; 4, kidneys. I proceeded at once with the analysis of the contents of the stomach, dividing it into two equal portions; one-half I digested with oxalic acid to dissolve the organic salt present, and separated the dissolved portion from the residue by filtration and decantation. I then separated the oxalic acid by nitrate of lime, and agitated this aqueous mixture with pure ether and caustic potash. By this process those vegetable alkaloids soluble in ether, such as strychnia, are separated from others, and from the usual animal and vegetable matters present in human food. The ethereal solution was then decanted, filtered, and evaporated to dryness. The residue thus obtained was then dissolved in chloroform, the solution filtered and evaporated to dryness, the residue treated with strong sulphuric acid to destroy extraneous colouring matter; the acid was then neutralized with caustic potash, evaporated to dryness, and treated with fresh ether; this ethereal solution dried, and the residue dissolved in pure chloroform. After these several purifications, a colourless residue was obtained, which, when a slight portion was applied to the tongue, gave a peculiar and strongly bitter taste, which remained on the palate for more than an hour. This process was completed on Friday afternoon, when, in the presence of Dr. Nottingham, Dr. Smyth, and Mr. W. Harris, I applied to a portion of this residue the appropriate tests for the detection of strychnia. These were four in number—1. Bichromate of potassa; 2. Ferridcyanide of potassium; 3. Permanganate of potassa; 4. Binocide of manganese. These tests were severally applied to the residue moistened with strong sulphuric acid. In each case a brilliant change of colour was produced, passing through all the colours of the spectrum, from deep blue through violet, purple, orange, and red, to a pale-flesh-colour. I applied these tests repeatedly with the same result, and in every respect they corresponded in appearance with strychnia; and I know of no other substance which, after such a process of purification, would exhibit any of these reactions. I dissolved a portion of the same residue in acetic acid, and administered it on Thursday afternoon to two frogs and a white mouse, in the presence of Drs. Nottingham and Smyth. I administered it to the frogs by inserting a few drops under the skin. To the first frog I applied it over the upper portion of the spine. In six minutes the frog was thrown into spasmodic convulsions, which precisely corresponded with the physiological effects of strychnia, and continued for about four hours, when the animal died. To the second frog I applied a few drops of the same solution under the skin of the thigh, and convulsions of a similar character commenced in three-quarters of an hour, and terminated fatally about five hours afterwards. I administered a

few drops to the mouse by the mouth. I observed no effect for three hours afterwards, except general uneasiness, a raising of the fur, and occasional palpitation of the chest and laboured breathing. It was put aside in a quiet place for a few hours, and when again observed, appeared drowsy and unwilling to move. After taking a little water and being thoroughly roused, it fell into a tetanic convulsion of a strychnoscopic character, and shortly afterwards had a series of similar spasms, with short intervals during half an hour, and died about eight hours after administration of the poison. I repeated these experiments in the presence of Dr. Nottingham, Dr. Smyth, and Mr. Harris, on Friday, with the more perfectly purified residue then obtained, upon two frogs, with a similar result. From the above experiments I have no doubt that the contents of deceased's stomach contained a fatal quantity of strychnia. A second portion of the contents of the stomach, treated with acetic acid and the solution tested with a persalt of iron, gave the reactions of meconic acid in small proportion, which is one of the constituents of Dover's powder. Another portion of the same solution, treated with pure hydrochloric acid, was boiled some time in contact with slips of copper, for the purpose of discovering the presence of antimony, one of the ingredients of James's powder; but no deposit could be obtained. A second portion was similarly treated, with a like negative result. One-half of the insoluble portion of the contents of the stomach was then dissolved in hydrochloric acid, and tested in the same way for antimony; but none was discovered. I tested a portion of James's powder obtained from Messrs. Clay and Abraham's dispensing bottle; $\frac{1}{4}$ of a grain of the powder gave in a few minutes a characteristic deposit of antimony upon copper by the same process; and I also tested another portion, and found it quite free from any trace of strychnia. I have commenced the analysis of other portions of the body, for the detection of absorbed strychnia by a similar process; but the quantities in these cases being extremely minute, the operations are proportionately tedious, and will probably extend over several weeks, but will not materially add to the value of the present evidence, as far as the purpose of this inquiry is concerned.

In reply to a question, Dr. Edwards stated that he was not prepared to say what was the cause of death; that was a question for medical men. Dr. Edwards said he was well acquainted with the arrangements of Messrs. Clay and Abraham's establishment, which he considered to be exceedingly good, and he knew that elaborate pains were taken to have the prescriptions checked; but it was proved that the bottle containing the strychnia, although bearing a "conspicuous label of the word "Poison," was kept on the same shelf as the James's Powder, and separated from the latter by only one other bottle.

It appeared from the evidence that the prescription was made up by Richard Poole, who stated that he believed that he dispensed it correctly; he had no doubt in his own mind that he used James's powder. He had been about two years in the service of Messrs. Clay and Abraham, during which time he thought he had made up between 50,000 and 60,000 prescriptions. After hearing the whole of the evidence, which had occupied the court more than five hours, the coroner summed up the case, and the jury returned a verdict to the effect that Mr. Lingard came to his death by the culpable neglect of Richard Poole in making up the medicine. In reply to the coroner, the foreman said their verdict was one of "Manslaughter." The jury also made a presentment to the effect that there might be a better arrangement of the bottles than at present adopted by Messrs. Clay and Abraham. Richard Poole was liberated on bail, himself in £100, and two sureties of £50 each.

We find that both "poison labels" and "poison corks" were brought into court, and their advantages in preventing accidental poisoning pointed out; but it will be observed that one fact elicited in evidence was a far more important element in this melancholy case than the absence of either "poison labels" or "poison cork," viz., that the strychnia was kept in a state of powder, and not in its crystalline form, as should always be the case; for it would have been almost an impossibility to have weighed five grains of these crystals without detecting the mistake; and the alleged advantage of having strychnia in a state of powder for the convenience of weighing small quantities is practically of no importance.—*Pharmaceutical Journal*.



LONDON, MAY 14, 1864.

CORRESPONDENCE.—All communications should be addressed to the Editor, at 24, BOW-LANE, E.C.; those intended for publication should be accompanied by the real names and addresses of the writers.

QUERIES.—The Editor cannot undertake to attend to those which are anonymous; or to send answers through the post.

SUBSCRIPTION.—The subscription to the CHEMIST AND DRUGGIST is 5s. per annum, payable in advance. Should a receipt be required, a stamped envelope must be sent with the amount of subscription. A specimen number may be had upon application, price 6d.

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THE CHEMIST AND DRUGGIST is published on the Fifteenth of every month, and regularly supplied direct to the Members of the Trade in Great Britain, Ireland, the Colonies, and all the principal seats of foreign commerce.

THE PROPOSED NEW PHARMACY ACT.

THE Bill prepared by the Council of the Pharmaceutical Society as an extension of the Pharmacy Act of 1852 has been printed, and may now be freely criticised. Its provisions are plainly described in the leading article of this month's *Pharmaceutical Journal*, and as "legislative language is always obscure" we propose to place before our readers a few extracts from this article, with such notes and emendations as we may think are required.

Before we discuss the Bill we must recount the events which have called it into existence, as the statement respecting its origin made by the *Pharmaceutical Journal* is calculated to mislead those who have not paid much attention to the questions which during the last few months have agitated the trade. In the CHEMIST AND DRUGGIST of last June we printed the suggestions made by the Executive Committee of the United Society for an Act of Incorporation to be based upon a recognition of all claimants to an interest in the trade of a chemist and druggist. In the very next number we had to expose the designs of the Medical Council who by certain amendments in the Medical Act proposed to deprive all chemists and druggists not connected with the Pharmaceutical Society of their lawful rights. We stigmatized this proposed measure as a "Bill of Wrongs," and severely censured the Council of the Pharmaceutical Society for pronouncing a favourable opinion on the scheme in their *Journal*. In the August number of the latter publication an old member of the Pharmaceutical Society, Mr. Barling of Weymouth, set forth the advantages of a General Act of Incorporation like that proposed by the United Society more than three months before, and which by this time had received the approval of the majority of chemists and druggists. Though no official declaration has been issued, it is generally admitted that the Medical Council have relinquished their intention to interfere with the chemists and druggists, in consequence of the determined opposition of the United Society and the general body of the trade. The Council of the Pharmaceutical Society took no part in the defensive movement, though many pharmaceutical chemists supported the United Society. At the close of last February a requisition prepared by one of the Founders of the Pharmaceutical Society and signed by nearly 300 town and country members was submitted to the Council, and in compliance with this requisition a special general meeting of the members of the society was held on the 17th of March, at which it was

decided that an application should be made to Parliament for an amended Pharmacy Act. With the requisition of the members was submitted a memorial from Leeds signed by forty-five members and non-members of the Society, but this document was not referred to by the Council in their resolution for calling the meeting. The *Pharmaceutical Journal* now endeavours to produce the impression that the Bill of the Council has been prepared solely to gratify non-pharmacutists, as will be seen from the following extract from the leading article:—

"We may premise that the Council was asked by chemists and druggists, not members of the *Pharmaceutical Society*, to endeavour to obtain a new Bill, or an extension of the Pharmacy Act, which should—

"Render compulsory the examination of all persons commencing the business of chemists and druggists hereafter;

"Reserve the vested rights and interests of chemists and druggists already in business at the time of its passing into law;

"Give to the whole trade a full and fair representation in its governing body; and—

"Protect the present chartered rights of the *Pharmaceutical Society*."

We acknowledge these four bases of operation to be "just and reasonable," and had they really been met by the Council "in a fair and liberal spirit," we should entreat the members of the United Society to aid the Council in getting their Bill enacted.

The preamble and first clause of the Bill are thus paraphrased in the leader:—

"The duty of dispensing medicines is so important, and the danger of its being performed by uneducated persons so great, that for the safety of the public it is necessary that all who undertake it should be specially educated for that purpose; and that the public should have some means of knowing who are, and who are not, qualified for their service, an examination shall be enforced, a register kept, and a special title given to those who may in future compound medicines: therefore—

"After the 1st day of January, 1865, no person shall commence business as a dispensing chemist unless he shall have been examined by the examiners appointed under the Pharmacy Act of 1852, and have received a certificate from them that he is qualified to be placed on the register of chemists and druggists."

An independent member of the Council, for whose opinions we have great respect, points out in a letter published in the *Journal*, the difficulty which arises in the attempt to restrict dispensing to those who are registered. The Act provides that it shall be unlawful for an unregistered person to keep open shop for "the compounding of the prescriptions of duly qualified medical practitioners." But how is the dispenser to distinguish between such prescriptions and family receipts, or receipts copied from standard works? The member of the Council unconsciously supports the incorporation scheme of the United Society in his remarks upon this difficulty. "To attempt the prohibition of preparing medicines from published prescriptions would be simply impossible, so long as the keeping and selling of these medicines, simple and compounded, are not also prohibited. Public safety is more endangered by the sale of medicines by uneducated tradesmen, whether they are called chemists or grocers, than it is by the dispensing of medicines from prescriptions; and my conviction is, that useful legislation affecting our trade must be based upon the restriction of the retail sale of poisons and powerful drugs to registered, and ultimately to examined dealers." This is also the conviction of the Executive Committee of the United Society, for their proposed Act will recognise all claiming to be chemists and druggists in business at the time of the passing of the Act, but will prevent any but qualified men from commencing business as vendors of medicines after that time. This is surely a more efficient measure for securing "the safety of the public," than one which has no provision against the sale of poisons and powerful medicines by ignorant dealers.

Let us now see how the "legitimate interests of those already in business" will be protected, if the Bill of the Pharmaceutical Council becomes law. We will again quote from the leading article:—

"But inasmuch as chemists and druggists who are already in business have obtained a vested interest in the trade, of which it would be unjust to deprive them, and it may be assumed from their experience that they are qualified, this provision shall in no way lessen their rights and privileges, but, on the contrary, those rights and privileges shall be confirmed and perpetuated by placing such persons on the register also; and on their part it is only required that they shall make a declaration, accompanied by the attestation of a duly qualified medical practitioner, that they were in business as dispensers prior to the 1st of January, 1865, and that they pay a sum not exceeding one guinea for such registration.

"And as there are many men employed as assistants to such chemists and druggists, some of whom have been many years so employed, their privilege of commencing business for themselves at some future time without undergoing examination shall be preserved also, and they shall be placed on the register of assistants, on making application for that

purpose, and bringing the certificate of two persons that they were so employed prior to the 1st of January, 1865, the fee for such registration being five shillings; and all persons whose names are on that register will be entitled on commencing business to be placed on the register of chemists and druggists on payment of a fee not exceeding one guinea; this exemption is limited to persons who shall have attained the age of twenty-one years."

All this seems fair enough at the first reading, but if well considered, and compared with various clauses of the Act, it will be found to comprise much that is unfair. In the first place, the invidious distinction between non-examined members of the Pharmaceutical Society and chemists possessing an equal claim to the patronage of the public is perpetuated. The latter are placed on a lower level, from which they cannot raise themselves unless they submit to examination. Again, every chemist must come to the Registrar of the Pharmaceutical Society provided with a good character from a medical practitioner, and must accept the decision of the Registrar with respect to his fitness for registration, unless he thinks proper to appeal from this decision and submit his claim to the consideration of the Council. To go from the Registrar to the Council would simply be jumping out of the frying-pan into the fire. Again, the candidate for registration must pay the Pharmaceutical Society for this strange confirmation of his rights and privileges. The regulations respecting the registration of assistants are equally unjust, and will crush the hopes of many clever youths who have not yet attained the age of twenty-one.

Passing over the description given in the leading article of the provisions made for ensuring the correctness of the Register, we come to the following passage:—

"Such is the scope of the statutory clauses as far as regards examination and registration, but then it is right that all persons should have a voice in their governing body; therefore every person registered as a chemist and druggist by virtue of examination shall be eligible for election as an Associate of the Pharmaceutical Society, and as such he shall be entitled to attend, take part in, and vote at all meetings of the Society."

"And to extend the benefit of the Benevolent Fund which has been established by the Society, and which can now only be administered to persons who are *actually* connected with the Society at the time of application, or to the widows or orphans of persons who were so connected up to the time of their death, it shall be lawful to relieve therefrom all persons who are, or ever have been, registered under the Pharmacy Act of 1852 or this Act."

The organ of the Council acknowledges that "all persons should have a voice in their governing body;" but the Bill does not allow even a whisper to those persons who have not passed the examination of the Pharmaceutical Society. They must pay and be silent while their affairs are being managed by the examined and unexamined members and associates of the Pharmaceutical Society. The extension of the Benevolent Fund is of little importance to the general body of the trade so long as the registered chemists and druggists are not allowed to participate in its management. No provision is made for appointing local boards of examination or for altering the present system of examination which presses so heavily upon those chemists who reside at a distance from London. Chemists and druggists seldom have long purses or much spare time, and if they are compelled by law to pass an examination, their certificates ought to be obtained cheaply and readily.

Such, then, is the proposed Pharmacy Act of 1864. We do not suppose that the Legislature will sanction its provisions, and we are inclined to think that its framers are sorry they did not prepare something more acceptable to the trade. This opinion is founded upon some remarks in the leading article of the *Journal* respecting the desirability of adopting Mr. Orridge's proposition to recognise all *bonâ fide* chemists and druggists as eligible to election for membership.

The Committee of the United Society having received from the chemists and druggists of Sheffield, Bradford, Nottingham, and Hull unmistakable indications of the feeling of the trade against the proposed Pharmacy Act, have sent us a full and frank avowal of their policy in the form of an address to the trade, which will be found in another part of our journal. They have also sent us a list of the contributions already received for the Defence and Incorporation Fund, which we have much pleasure in publishing, though to make room for it without encroaching upon space devoted to readable matter, we have been compelled to add *four extra pages* to our number. We trust that this Fund will grow rapidly, for we are convinced that the proposed Act of Incorporation upon which the money subscribed will be expended, is just what is wanted to improve the position of the trade and to preserve their interests.

But "*Audi alteram partem.*" If little can be said in favour of the Bill of the Pharmaceutical Council, a very long letter may be written upon it by a pharmaceutical chemist, as our readers will see if they turn to our Correspondence columns. We welcome this champion of the Council to the lists of discussion, which are open to all comers, and we trust that many of his brother pharmacutists will be induced by his example to join in the tilting.

A REVIEW OF THE BRITISH PHARMACOPEIA.

BY J. C. BRAITHWAITE AND J. C. BROUGH.

IV.—THE EARTHS AND THEIR PREPARATIONS.

THIS group includes some important medicinal agents and many articles employed in pharmaceutical and chemical processes. In the Brit. Ph., formulæ are given for preparing several members of this group that are merely named in the Mat. Med. of the older pharmacopœias, and two or three new preparations are described.

BARYTA.

This earth is represented by one salt only, viz.,—

Chloride of Barium.— $\text{BaCl} + 2\text{HO}$. This is placed in the Appendix, without a process, among articles employed in chemical analysis. Processes are given in E. and D., but not in L.

Solution of Chloride of Barium.—This is placed in the Appendix as a test solution, and contains one oz. of the crystallized salt in ten fl. oz. of distilled water. This is preferable to the solution in the Appendix of Ph. L., which contains 5j of the salt to one fl. oz. of water, and is too strong for ordinary analytical purposes.

Omissions.—"*Barytæ Carbonas*" and "*B. Sulphas*," E. D. Mat. Med.; "*Liq. Bari Chloridi*," D., "*Solutio Barytæ Muriatis*," E. In omitting the last two poisonous solutions from the list of medicinal preparations the compilers of the Brit. Ph. have acted wisely.

LIME.

CALX—Lime.— CaO . This familiar substance is described in the Mat. Med. with absurd fulness of detail. Those who use the Pharmacopœia scarcely require the information that lime is obtained "in light lumps, externally of a dirty white colour, white within."

CALCIS HYDRAS—Slaked Lime.—This is now dignified by a place among the official preparations. The process given consists in slaking two pounds of recently burned lime with one pint of distilled water, in a covered metal pot, and sifting the products when cool.

LIQUOR CALCIS—Solution of Lime.—This is prepared by agitating slaked lime with distilled water. When required for use the clear solution may be drawn off from the subsided lime with a siphon. It is a saturated solution, and, consequently, resembles the "*Liquor*" of L. and D., and the "*Aqua Calcis*" of E.

LIQUOR CALCIS SACCHARATUS—Saccharated Solution of Lime.—This is one of the novelties of the Brit. Ph. It is simply a solution of lime in which the earth is rendered much more soluble by the addition of sugar. One fluid ounce contains 7·11 grains of lime, or nearly twelve times as much as an equal quantity of *Liquor calcis*. The dose is from one to two fl. dr. in water or milk. A saccharated solution of lime was first used by Trousseau, and a solution, stronger than that of the Ph. Brit., was afterwards introduced into British practice by Dr. John Cleland.

LINIMENTUM CALCIS—Liniment of Lime.—Same as that of L. and D.; differs from that of E. in containing olive, instead of linseed oil.

CALCIS PHOSPH. PRÆCIPITATA.—Precipitated Phosphate of Lime.— $3\text{CaO}, \text{PO}_3$. This is ordered to be made by the D. process, which consists in dissolving bone ash in hydrochloric acid, and precipitating by ammonia. It is used for making "*Pulvis Antimonialis*." There is no corresponding preparation in L. or E.

Bone Ash, which consists principally of phosphate of lime, is placed in the Appendix. It represents the "*Cornu ustum*," L., which is a crude phosphate of lime, prepared

from horn by fire. Bone ash is employed in the preparation of sodæ phosphas, and the lime salt noticed above.

CALX CHLORATA—Chlorinated Lime.—This is the "Calx Chlorinata," L. E. D., and is now correctly defined "as hypochlorite of lime, CaO, ClO , with chloride of calcium and variable amount of hydrate of lime." No process is given, the Pharmacopœia Committee having in this case followed the example of the London college, and accepted the product found in commerce, merely giving tests for its purity.

LIQUOR CALCIS CHLORATÆ—Solution of Chlorinated Lime.—This is the "Liq. Calcis Chlorinatæ," D., and is prepared by triturating one lb. of chlorinated lime with one gallon of distilled water, and filtering through calico. Surely the proportion of chlorinated lime might have been left to the prescriber, and the preparation of the solution to extemporaneous pharmacy. The dose is from 20 to 40 minims in advanced stages of typhoid fever. This solution is also applied externally to foul ulcers.

CALCIS CARBONAS PRÆCIPITATA—Precipitated Carbonate of Lime, CaO, CO_2 .—This is the D. preparation, with the name altered in gender, "præcipitatum" having become "præcipitata." To make it, a hot solution of chloride of calcium is precipitated by one of carbonate of soda. It is a good introduction, being in many respects preferable to prepared chalk, with which it is identical in composition. According to the Mat. Med. of the Brit. Ph. it is employed for making "mistura cretæ;" but when we come to refer to the formula for this preparation we find ordinary prepared chalk ordered. This is one of the numerous instances of careless editing which disfigure the work.

CRETA PRÆPARATA—Prepared Chalk.—This is defined in the Mat. Med. as "carbonate of lime, CaO, CO_2 , nearly pure;" it is prepared by the D. process.

Chalk is noticed in the Appendix, where we may obtain the valuable information that it is "soft white amorphous native carbonate of lime." Every pharmaceutical student ought to make a note of this, so that he may be in a position to recognize a piece of chalk if he should ever happen to meet with this rare substance.

Marble is also noticed in the Appendix among articles employed in the preparation of medicines. It is a good introduction, being far preferable to prepared chalk for generating carbonic acid.

MISTURA CRETÆ—Chalk Mixture.—This closely resembles the L. and D. preparations, being made from prepared chalk, gum arabic, syrup, and cinnamon water. Some months before the Brit. Ph. appeared, Mr. B. S. Proctor contributed a paper to the CHEMIST AND DRUGGIST* upon this popular mixture, and clearly explained his reasons for preferring prepared chalk to the precipitated carbonate of lime as the chief ingredient. As Mr. Proctor's decision upon any point in practical pharmacy may be safely accepted, we are glad that the intention of the Pharmacopœia Committee to employ the purer but less eligible substance in the preparation of this mixture has not been carried out. (See Calcis Carbonas præcipitata, above.)

PULVIS CRETÆ AROMATICUS—Aromatic Powder of Chalk.—This replaces the "Confectio aromatica," L. It differs essentially from "Pulv. Cretæ Co.," L. E. D., by containing saffron and cloves, and by omitting the tormentil root and long pepper of the L. form. The new "Pulv. Cretæ arom. cum Opio" will be noticed among preparations of opium.

In the Appendix we find the following articles in addition to those already noticed:—

Chloride of Calcium dried at a dull red heat. This is noticed as an article employed in the preparation of medicines.

Solution of Chloride of Calcium, containing 1 oz. of the salt in 10 fl. oz. of distilled water; also a **Saturated Solution of Chloride of Calcium** prepared by dissolving 336 gr. of the salt in 1 fl. oz. of distilled water. Both solutions are intended for qualitative analysis.

Plaster of Paris is placed among articles employed in chemical analysis, and a filtered solution of the same under the name of **Solution of Sulphate of Lime** is placed with a form for preparing it among the tests.

MAGNESIA.

MAGNESIA—Magnesia.— MgO . The article to which this

familiar name is applied is not the "Magnesia" which has hitherto been official, but the heavy calcined magnesia prepared from the heavy carbonate.

MAGNESIA LEVIS—Light Magnesia.— MgO . This is identical with the "Magnesia" of L. E. and D., and differs from the preceding preparation only in its greater levity, the volumes corresponding to the same weight, being to each other as $3\frac{1}{2}$ to 1. It is prepared by calcining the light carbonate. Our readers must bear in mind that when Magnesia and Magnes. Carb. are prescribed according to the Ph. Brit., without the addition of "levis," the heavy preparations are to be dispensed.

MAGNESIÆ SULPHAS—Sulphate of Magnesia.— $\text{MgO}, \text{SO}_3 + 7\text{HO}$. In Mat. Med. only.

ENEMA MAGNESIÆ SULPHAS—Enema of Sulphate of Magnesia.—This resembles the "Enema catharticum" D. in containing 1 oz. of Epsom salt and 1 fl. oz. of olive oil; but differs from it in containing 15 fl. oz. of mucilage of starch, instead of 16 fl. oz. of mucilage of barley. It is doubtless a useful cathartic, but appears to us to be out of place in the national pharmacopœia. There is no reason why the proportions ordered should be adopted whenever an enema of Epsom salts is prescribed.

MAGNESIÆ CARBONAS—Carbonate of Magnesia.— $3(\text{MgO}, \text{CO}_2 + \text{HO}) + \text{MgO}, 2\text{HO}$. This is identical with the "Magnesiæ Carbonas ponderosum," D., and is prepared by the D. process slightly modified. It is a white granular powder.

MAGNESIÆ CARBONAS LEVIS—Light Carbonate of Magnesia.—This is the same substance in a different physical condition. Under the microscope it is found to be partly amorphous with numerous slender prisms intermixed. The form for preparing is essentially the same as that given in D. under "Magnesiæ Carbonas," which name this preparation also bears in L. and E. (see above). **Solution of Ammonio-Sulphate of Magnesia** is introduced in the appendix as a test-liquor, with a process for preparing it.

ALUMINA.

ALUMEN—Alum.—This is defined in the Mat. Med. as "Sulphate of Alumina and Potash, $\text{Al}_2\text{O}_3, 3\text{SO}_3 + \text{KO}, \text{SO}_3 + 24\text{HO}$," and the tests given are applicable to alum having this composition. Most of the alum of commerce, however, is ammonia-alum, sulphate of ammonia prepared from the residuary liquor of the gas-works being substituted for sulphate of potash in the manufacture. The properties of these two alums are so similar that they are seldom distinguished. The compilers of the United States Pharmacopœia have made both of them official, and it is much to be regretted that the same course has not been adopted by the Medical Council. Ammonia-alum will still be used in spite of the pharmacopœia tests.

ALUMEN EXSICCATUM—Dried Alum.—This is ordered to be prepared by heating alum (potash alum) in a porcelain capsule till aqueous vapour ceases to be disengaged. If ammonia-alum be employed the heat must not be sufficient to drive off the ammonia.

TRADE SWINDLING.

THE vendor of the "Royal Vermin Exterminator" is still pursuing his vocation of swindling, though it appears he now represents the firm of L. Morton & Co., of 25, Temple-street, Bristol.

A victim residing in the Black country writes to us as follows.—"A person called upon me on 8th April, professing to represent a firm, Messrs. L. Morton & Co., 'Manufacturers of the Royal Vermin Exterminator,' 25, Temple-street, Bristol. Bill-heads printed as above; upon the strength of this assertion, I purchased, as you will see by enclosed account, a quantity of his powders amounting to £2, less 5s., with the understanding that the town was to be billed, and advertisements inserted in the local papers. Not having heard from the firm I wrote to them, addressing as above, and received my letter back again through the Dead-letter Office, with 'No such firm in Temple-street' written on it by the postman. Trusting that the letter will act as a warning to young beginners, and others older in the trade, I shall feel obliged by your giving it a corner in your paper."

* See last volume, page 279.

THE BRITISH PHARMACOPOEIA.

(From *The Lancet*.)

THE fact cannot be too clearly understood that, for any practical end, no "British Pharmacopœia" can now be said to exist. The Pharmacopœia, which was compiled under a divided responsibility by committees working at great distances, has proved a book which, scientifically and practically, is in its present state a failure. It has fallen still-born from the hands of its authors, so far as London practitioners are concerned; and there is, at this moment, in the shops of the dispensing chemists of England few greater rarities than a physician's prescription from what pretends to be the national Pharmacopœia. It is worthy of note, too, that some of the more glaring errors or accidents of the large edition have been silently repaired in the small volume, which purports to be a reproduction. But scores of useless directions and bad processes remain. We shall never submit to call hydrarg. chloridum corrosive sublimate, or to lose an old infusion of gentian, or to spoil our blistering-paste, to oblige the authors of the Pharmacopœia; or generally to put ourselves out to the extent of going to school again, until the book from which we are to learn is revised and freed from its errors and blunders. We believe that the plan of appointing a single responsible editor, whose sheets shall be subject to revision, is that most likely to be successful. Unless the Council resolve to do some such gentle violence to the paternal feelings of the compilers of this book, it seems, from several recent manifestations of their misplaced affection, that they will be pretty sure to spare the scissors and spoil the child. There is some talk of publishing an Appendix of corrections; but the profession will not care to be made the whipping-post of the Pharmacopœia Committee, by having to read two dull books instead of one. They would like to have a correct Pharmacopœia, instead of one full of errors and another full of corrections. If the Pharmacopœia Committee of the Medical Council are unwilling to have this provided, Dr. Billing suggested last week at the College of Physicians that it might be a desirable course that that College should issue an amended edition of their London Pharmacopœia—a proceeding which would of course be, from an imperial point of view, far from desirable or respectful, but which might be justified by certain contingencies.

DOCTORS AND CHEMISTS.

THE following amusing article, which appeared some time ago as a "leader" in the *Sheffield Daily Telegraph*, is an important expression of public feeling in favour of the preservation of the present rights of chemists and druggists:—

"Time was, and that not so long ago, when the practice of physic was in the most barbarous condition. The strongest poisons were then the most favourite drugs, and the knife termed a lancet was in constant requisition. To use an expression of the time, physic was 'thrown in,' and the being into which it was thrown—was that exquisitely delicate and eminently complicated piece of organised machinery—that creature so 'fearfully and wonderfully made'—that 'paragon of animals, MAN.' Then limbs were cut off by the stop-watch, and the operation, if brief, was pronounced 'beautiful,' though the patient died. Every morning there was nicking of arms and pricking of veins, and the predominant idea of saving life was to save it by letting out, until the victim grew dizzy and swooned, the red warm life-stream from his collapsing veins. Drastic drugs and violent chemicals—things pungent, blistering, and poisonous—were given in such quantities that the patient soon found his doctor to be, as the witty Frenchman described him, 'the man who kills you to day to save you from dying to-morrow.' In some public dispensaries at that time—and we are writing of a period as recent as thirty years ago—above a score of poor people might be seen in a morning all seated in a row, holding their own basins, while from a score of bare and bandaged arms there poured in a bowed line like that of a churchwarden's pipe, a thin crimson stream. That emptying of people's veins was done in such places out of kindness and as a work of charity. If

the blood was thin, or thick, or light, or dark, a sage shake of the head pronounced it bad, and the poor were almost led to believe that they would live for ever if they could only step outside their skins and sit, as Sidney Smith proposed, in their bones. Then the quantity and potency of the physic given was truly alarming. The judge who facetiously proposed that the doctor should send out his liquids in 'the wood' instead of in the bottle was an economist worthy of those drenching days when doctors' bills were thought reasonable or unreasonable, according to the bulk and variety of the medicine supplied—when powder and potion, ointment and pill, blisters and cupping-glasses, lancets and cauterics, scarified a man inwardly and outwardly until he felt as eels may be supposed to feel when they are skinned alive. The victim of all that professional savagery was taught to believe and *did* believe that violent measures were necessary, and that he was the most zealous soldier of medical science who brought to the attack the largest boxes of pills, the largest bottles of mysterious nastiness, and the most portentous variety of weapons of war.

"Well, let us be thankful that *that* system has departed. It is not the plan now-a-days to light a fire in a man's inside by means of deadly doses of corrosive stuff, and then to tell the agonized sufferer that his agony is a favourable symptom, and that 'the medicine is struggling with the disease.' It is not so fashionable to set up commotion, anguish, and the throes of revolution in the home department of a man's abdominal amplitude, and then to tell him with all the gravity of a Minister of the Interior that for him those throes of revolution are the requisite preludes of internal reform. Nor are patients on their part so ignorant as they were. They used to delight in the grim, formal torturer, as an energetic and zealous man, and if they suffered more under him they got more for their money, as did the man who complained of giving half-a-crown to a dentist for drawing his tooth in an instant, whereas for the smaller charge of sixpence the blacksmith had spent half an hour over a similar job, and had into the bargain dragged him three times round the room. That was the era of physic in its uncivilized state, and a remnant of the not remarkably remote day when the 'healing art' shortened the average of life a great many years, and when the heir who was weary of waiting for his estate had but to persuade his venerable papa to call in his trusty 'leech,' and allow himself to be put through a medical course. For in that older time to which we allude astrology was mixed up with medicine, calomel was administered by the drachm until the teeth fell out and the bones decayed; 'crabb's eyes' and 'oil of bricks,' and strange unnameable things, nasty to think of and nauseous of taste, were among the favourite remedies of the Pharmacopœia; and Royalty itself—aye, Majesty ermined and sceptered—was dosed with powdered mummy, as if the house of Plantagenet were to be cured of all ills by swallowing in foetid powder the desiccated dust of some Egyptian king. Shakespeare has moralized on the base uses to which a monarch may be put after death; but it did not occur to him that in his time the ancient Egyptians—possibly the pyramid-builders themselves—were being sent out, bit by bit, in powders to be taken in jelly three times a day. We censure not the doctors of old for that drenching system which lasted beyond our boyhood. The people demanded it. The age knew no better. The charm and secret of medical authority were in the mystery with which it was enveloped, and when the tide of reason and reform did begin to set in the multitude were indignant at the first physicians who found courage to withhold the knife and to give forth no basketful of boxes and big-bellied bottles; but most indignant were they when Esculapius, jun., told them to wash themselves inside and out with clean water, and then sent them, with some instructions about diet and drink, empty-handed away.

"But we are entitled to recall these facts to memory when the profession seeks to prevent that respectable and intelligent body of men, the chemists and druggists, from telling a poor man what may do him good for a cold. It is announced that next year a bill is to be introduced to prevent any druggist from prescribing for a poor man. The aim of this new measure is to force all classes to consult the profession about all their ailments, great or small. No toothaches are to be cured, no twinges of cholic abated, no colds mollified, and no teething powders given to fractious babies, except by some diploma-ed and certificated Sawbones, who will of course, if

only for the dignity of the cloth, charge half-a-crown for the job. We anticipate for such a bill the indignant displeasure of the public and its prompt rejection by the House. It is not our intention here to do battle for the whole of the druggists so called. There are impostors who pretend to be druggists and are not—men who after working in a surgery or infirmary for a few years have put up a sign and some red and blue bottles, and have undertaken to deal out drugs, although their sole knowledge of drugs is limited to such a share as they may have imbibed through their fingers in washing gallipots or in rubbing down every morning the legs of the doctor's horse. But the chemists proper are most useful members of society, whose qualifications are far higher than their modest charges imply. We may say of some of them that their business is itself a work of charity, and that their usefulness is best shown in close attention to it. Their knowledge of the qualities and properties of drugs is the result of a larger daily experience in the examining and handling of such things than any medical man can possess, and in those common cases of common and easily recognisable complaints which come daily before them, they will frequently, for a few coppers, do better for the poor man than the most popular and high-charging of the fashionable representatives of the Faculty. The attempt to stop the druggist from dispensing medicine is a foolish proceeding. It will not succeed; it is made against the public wish; it is conceived in a narrow spirit, and, from what we know of the intelligence, the liberality, and the good taste of all the abler members of the medical body, we are sure that it has not so much as a majority of the doctors on its side."



The Chemist's Price-book or Retail Counter Companion. By JOSEPH GODDARD, M.P.S. Seventh Edition. London, 1864. Barclay and Sons, 95, Farringdon-street. Pp. iv.—296. Price 5s.

THIS standard trade-list is so well known to most of our readers that the announcement of a seventh edition would be almost sufficient notice of its appearance. For those few tyros who do not know of its existence we would simply tell them, for their information, that it consists of a list of about 5000 drugs, chemicals, preparations, and sundries sold or used by pharmacutists, arranged alphabetically, columns being provided for the insertion of the places in stock or shop, the selling-prices per dram, per oz. and per lb. to retailers and surgeons, and the cost-price of every article. The book is printed on good thick blue wove paper, and is ruled throughout. At the end are several tables and memoranda, which will be found useful a dozen times a-day in carrying on either a retail or wholesale business.

Proceedings of the American Pharmaceutical Association, at the Eleventh Meeting, held in Baltimore, September, 1863.

It is with a great deal of pleasure that we hail the appearance of the above work, showing as it does that our energetic American brethren can still work as hard as ever in the interests of man, in spite of the trouble that is gradually devastating their great country. There is something truly grand in seeing these men pursuing their investigations with perfect deliberation and calmness almost within sight and sound of the horrors of battle. Referring our readers to our review of the last volume of the Proceedings of the Association (vol. iv., p. 253) for an account of the object of this body, we shall give a short sketch of the more interesting papers contained in the present work, deferring the more particular consideration of several of them until the war waging in this country between the Pharmaceutical Federals and Trade Confederates has somewhat abated.

The meeting for 1863 was held at Baltimore, and lasted five days. Several most important papers and reports were read during the session, and on the last day of meeting resolutions of congratulation, moved by Professor Parrish, were adopted, and ordered to be sent to the Council of the British Pharmaceutical Conference.

The reports commence with that by Mr. F. F. Mayer, on the progress of chemistry and pharmacy throughout the world during the preceding year. It contains condensed accounts of all the important discoveries and researches, and gives copious references to the works in which the papers containing them first appeared. The reports by the Corresponding Secretary on the Colleges of Pharmacy at present existing in America is of almost purely local interest, and the same remark will apply to that on the New York drug market, by a committee especially appointed for the purpose. It appears that the adulteration of drugs is carried on to an enormous extent in America. The report winds up with some very severe strictures on the Government for winking at such transactions. In a report on the comparative value of European and American aconite Professor Parrish states that, from careful experiments made on both, the American root contained twice as much aconitine as the European specimen. Mr. P. W. Bedford describes an excellent method of preserving essential oils. Instead of using a bottle, he uses a syringe, which fits mouth downwards, with a ground glass conical hole, the syringe being supported in a sort of rack. Two articles are on "Sanguinarina," by Dr. Thomas, and another on "Fluid Extracts," by Mr. W. Procter, we shall return to later. The position of pharmacy as the handmaiden of medicine, is well conceived and most delicately carried out by Professor Parrish, the whole subject of counter practice being touched on with effect and excellent taste. It concludes by claiming for pharmacy "an equal and independent place—no longer as a handmaiden but as a modest and docile sister—beside the more numerous and distinguished branch of the medical family."

The Association will meet next year at Cincinnati, and prizes will be given for the best essays on "*Cimicifuga racemosa*," and on the culture and preparation of *Elatarium* in the United States, accompanied by a specimen of product of not less than 120 grains.

A Toxicological Chart; exhibiting at one view the symptoms, treatment, and mode of detecting the various poisons, mineral, vegetable, and animal, &c. By W. Stowe, M.R.C.S.E. London: Churthill and Sons. Twelfth Edition, mounted on cloth, 2s.; on rollers, 5s.

We must confess to being very fond of seeing the walls of a study or surgery well placarded with useful tables and charts. Mr. Stowe's is one which no pharmacist should be without. In these days of continued accidental and wilful poisonings our readers are often called upon to administer antidotes, and we fear that much valuable time is too frequently lost in hunting up symptoms and treatment in "Taylor," or similar works. In the chart before us everything is given in the tabular form, and may be found in an instant. The chart is divided into four parts:—1, Mineral poisons; 2, Vegetable poisons; 3, Animal poisons, including stale fish, and bites of venomous and rabid animals; 4, Asphyxia, or suspended animation. The symptoms, treatment, and method of detecting each poison are arranged in parallel columns, and are drawn up with great care and exactitude. Amongst the mineral poisons the treatment of bismuth is mentioned, but it is questionable whether it is a poison *per se*. We remember some years since being horrified by seeing a distinguished foreign chemist coolly swallow a large dessert spoonful of this compound as a remedy for diarrhoea. He, however, quickly quieted us with the assurance, that when perfectly pure it had no poisonous effect on the animal system, the cause of death arising from its use being due to the large quantities of arsenic and other impurities nearly always contained in the ordinary quality. Under the head of asphyxia, we are glad to see the Sylvester method of restoring suspended animation is strongly recommended. One or two accidental errors have crept into this edition of Mr. Stowe's chart; for instance, under "iodine" we find iodide of *soda* mentioned; and under "silver," the chromate of that metal is stated to be *yellow*. These errors of course are unimportant, and almost correct themselves. It would, we think, be a great improvement if the "rules" separating the columns were somewhat thicker, as at present, especially in a bad light, the lines of the more crowded portions are apt to run together. This, however, is a matter of little importance, and does not interfere in any way with the very high value to be placed on Mr. Stowe's production.

The Prescriber's Pharmacopæia: containing the "British Pharmacopæia of 1864," arranged in classes according to their action, with their composition and doses By a PRACTISING PHYSICIAN. Fifth Edition. London, Churchill and Sons, 1864. Pp. xii.—156. Price 2s. 6d.

ALTHOUGH ostensibly written for practising physicians, there is an immense amount of useful information in this little book which will be found especially serviceable to the chemist. The great feature of the work is the division of medicines, with their different classes, with the minimum and maximum doses of each. The arrangement of the matter throughout is alphabetical, and the composition of the more simple preparations is often given. In many instances, too, a list of incompatibles is appended to the remedy,—an extract will show this more fully.

INFUSUM DIGITALIS.

Comp. Digitalis dried, 30 grs., water, 10 fl. oz.

Dose. fl. oz. $\frac{1}{2}$ —fl. oz. 1.

Incomp. Iron preparations, acetate of lead.

At the end is a classified list of poisons and counter-poisons, followed by several useful tables and memoranda. The index is particularly full, and every pains has been taken to facilitate easy reference to any part of the work. We can safely recommend this little book to our readers as one of the best of the many manuals called into existence by the appearance of the "British Pharmacopæia."

Tables of Chemical Formulae. Arranged by W. ODLING, M.B., F.R.S. etc. London: Taylor and Francis, 1864. pp. 16. Price 1s.

A very useful set of chemical tables has just been compiled by Dr. Odling, principally, we believe for the use of the pupils belonging to his classes. As, however, they contain information not to be found elsewhere in so concise a form, we have great pleasure in recommending them to our most scientific readers. We need hardly say that Dr. Odling adopts the unitary system of notation throughout; and if for nothing else, this little work will be highly useful in making the followers of the old-fashioned system familiar with the new formulæ and atomic weights. The first five tables contain the elements and their atomic weights classified in groups, with reference to their chemical behaviour, and not according to their physical properties. We are somewhat surprised, however, to find that Dr. Odling classes "Thallium" amongst the alkaline metals, in accordance with the views of certain French chemists, whose pertinacity in sticking to their erroneous opinions is greater than their power of drawing logical conclusions. If any of our readers are of this way of thinking, we recommend them to read the extract from the Chemical Society's *Journal*, which will be found under our general head of "Science." The tables which follow, give the atomic and specific heats of the principal elements, the normal vapour densities of a large number of elements and compounds, the primary hydrides and their oxides, the oxygen acids, the homologous organic groups, winding up with the primary multiple and mixed types. This little book will be found quite indispensable to any of our readers commencing in good earnest the study of the unitary system. We would, however, warn them that it not only doubles the atomic weights of oxygen, sulphur, selenium, tellurium, and carbon, but also those of calcium, strontium, barium, magnesium, copper, iron, mercury, lead, and some fifteen or sixteen besides, in accordance with the views of Canizzaro, Deville, and others which are daily gaining ground. By the way, whilst on this subject, may we ask, with all humility, knowing as we do how laboriously this illustrious philosopher is working for the advancement of science, when are we to see the second part of his "Manual of Chemistry," promised in the summer of 1862?

A Dictionary of Chemistry, etc. By H. WATTS, etc. Parts XIV. and XV. Hamaphein—Hyalophane.

THIS excellent work still keeps up the character it has already acquired, and continues to deserve all the praise it is in our power to bestow upon it. In the two parts before us, over 120 pages are taken up with a most masterly monograph on "Heat" by Mr. G. C. Foster, who seems as much at home, and writes as brilliantly on this subject as on others of a more purely chemical nature having his initials in other

parts of the book, while for clear and close reasoning it very nearly beats his famous article on "Classification." This is well-nigh the highest eulogium we can pass on it; and can only say, that these two articles, taken in conjunction, appear to point to a very great fortune for this young philosopher. The articles on "Heptyl" and "Hexyl" and their derivatives, by the Editor and Professor Wanklyn respectively, will be read with great interest by the scientific chemist.



PROPOSED LEGISLATION AFFECTING CHEMISTS AND DRUGGISTS.

TO THE EDITOR OF THE CHEMIST AND DRUGGIST.

May 6, 1864.

SIR,—As a chemist and druggist, neither registered nor holding the certificate of the Pharmaceutical Society, I have for years past been able to procure sufficient confidence and support from the public to make me satisfied with my standing, and have considered strict attention to business my best qualification, and the surest way to provide for old age. All at once we seem to have become excited and confused, in consequence, I presume, of the proposed Medical Bill, which threatened to close the shops of all who were not members of the Apothecaries' Society, or of the Pharmaceutical, under pretence of caring for the public. I am never more disgusted than when reading of the sympathy of the medical practitioner for the public. In my younger days I had an excellent opportunity of knowing the secret of this medical philanthropy, and I now hold in abhorrence such sickly twaddle. The question is one of gain, and we ought to have done with shams, and meet the question in its proper character. The Medical and Pharmaceutical Councils represent classes of educated men, and it is their duty to see to their interests. And they are thus acting. Why should we find fault with them for this? If I were a member of the Pharmaceutical Society I should expect the Council to study my interests, and not those outside the Society. But I am not a pharmacist. I don't want to be one. I decline to be registered by that Society, or to be under its government, or to pay a guinea per annum because it represents a different class of objects to those I and others have any care for. By what right do a dozen men, representing only 2,000 out of 16,000, compel us to become registered without our sanction or request? Before this amended Act goes up to Parliament let it be put to the country, and let the outsiders declare whether they wish this self-constituted government to act for them. Are we to be registered as *second class* tradesmen because a few pharmacists meet and so agree? Are we, who are neither interested in scientific pursuits or chemical knowledge, but in the mixed character of a druggist's business, to be drawn into an inferior position, and governed by men whose interests are opposed to ours, and with whom there can be no sympathy? Are we to be blinded to the object of this Act, which is nothing more than a tax upon twelve or fourteen thousand men, who can have no advantage in being under pharmaceutical control, especially with a badge of inferiority, to prop up an institution, which for twenty years past has been repudiated by men in every respect equal to the few belonging to it, and who now have not changed their opinions that it does not represent their wants? Let it boldly assert its determination to advance those belonging to it, and we understand their object, and can appreciate, although for our own sakes we are compelled to oppose.

As the Medical Council desired a medical monopoly, so does the Bloorbury Council hope for a Pharmaceutical restriction. If the United Society hopes to gain the confidence of us who wish to remain as independent as we have hitherto been, let it also be candid. Let it throw off all timidity, and not in seeking to gain the co-operation of the Pharmaceutical, lessen its power, for if it acts for the good of the trade, it must have no dealings with that society. If it has an object at all, let it be understood. If it will boldly declare its politics to be anti-pharmaceutical, then we shall believe it is acting for our good. If it is afraid of being considered opposed to education, it is not worthy of support. Let it rely upon broad principles; no one now can be thought averse to knowledge. Let it sound its note, and depend on itself, but let us hear nothing of such cant as caring for the public. It is a trade society, and professes to have for its objects such purposes as the Pharmaceutical Society thinks beneath its dignity to meddle with. The trade desires to be left alone, or at any rate to remain on an equality in commercial competition. The trade desires the Pharmaceutical Society to attend to the intellectual studies and welfare of its own members, and to trouble itself about the qualifications of outsiders when asked to do so, and not before. The trade wants just such government as will protect it from such deceitful measures as that now proposed by the Pharmaceutical Society.

The Benevolent Fund is thrown open to all, and judging by the success of that of the United Society would likely be greatly augmented thereby, but who will believe that where two applicants seek relief, one a pharmacist and the other a registered chemist, but that the favourite child would in all cases be considered the most deserving? Where partiality exists, there can be no justice. Can it be possible that there exists one outsider who would prefer to be thus linked to a society which despised him?

If there must be an incorporation, then let it be one on a broad base. Let every district manage its own affairs, and by having examination boards in the provinces, members would then be spared expense and trouble, and save money which otherwise will go into the Pharmaceutical coffers. I hope to learn soon that the United Society have resolved to press their proposed Act, in opposition to the Pharmaceutical measure, for after carefully considering the latter, I am convinced of its degrading character to all outsiders, and do not hesitate to sign myself for the first time

AN ANTI-PHARMACEUTIST.

TO THE EDITOR OF THE CHEMIST AND DRUGGIST.

SIR,—By referring to the report issued in July last by the Pharmaceutical Society, I find it professes to have 362 members, who have passed their examinations; of which 28 are abroad, 67 in London, and 267 throughout the country. By the side of these, are 1,636 who have subscribed since 1853, and who are placed on equal footing with those who have acquired their degree by study, and not by subscription.

As the safety of the public is supposed to be the reason for legislation, is it likely that members of Parliament will consider the 1636 more competent than the thousands who have never claimed association with the Bloomsbury Institute? If these members themselves would but honestly reflect, they would feel that they were in no way more intelligent than many who are now termed outsiders; and that in many instances, the certificate is a sham and imposition, for it is made to represent intellect, whereas it is but a receipt for so much cash, which the greatest blockhead might have got in 1852. It is of such as these that outsiders are envious? It is to be placed on an equality with these, that the United Society is said to be clamorous? Certainly not, but indignation causes them to be indifferent to membership, whilst such a sham exists. It may be said that these deserve the degree for the money they have given. The Pharmaceutical Society may be indebted to them, but the public and the trade discover no competency, when after 23 years' exertions out of 16,000 tradesmen, only 2,000 have contributed to its support, and only 362 have passed an examination. Where is the honour in being connected with such an institution? For those who have earned their title by merit have arrived at the same distinction as those who have paid cash. I would suggest to those who honourably hold their claim by examination, that they place in conspicuous numbers, the year in which they passed, over their places of business, and thus enlighten the public, and reap their just reward.

When Mr. Bell worked for the trade, his labour was without vindictiveness. His words would not be, "you refused to acknowledge us when we first wanted your co-operation. You did not believe in us. Now that we have become important, you shall not be received into our ranks." Yet such is the presumption of the present Council.

If the 362 are willing, every man in business could be placed on an equal footing, and by the liberality of many who have given expression, I doubt not, for the future good and unity of the trade, they would consent. This is the only way to settle the matter, for whilst the outsiders have no wish to decry the 362 examined members, they feel it would be doubtful honour to be placed on a level with the others; but a very great wrong, that these men should be enjoying privileges on the false pretence of being educated.

May 14th, 1864.

I am, Sir, yours obediently,

AN OUTSIDER.

AUDI ALTERAM PARTEM.

TO THE EDITOR OF THE CHEMIST AND DRUGGIST.

May 3, 1864.

SIR,—We all know how a certain facetious Frenchman (M. Assolant) writes about England and the English. And there are, perhaps, few of us who can rise from the perusal of such mistaken and ungenerous sarcasm unaccompanied by a firm and settled conviction that at the bottom of it all there lies coiled up in fancied invisibility, the "green-eyed monster that makes the meat it feeds on." I regret to say that some such impression as this took possession of my mind after a careful perusal of the correspondence contained in the last number of the CHEMIST AND DRUGGIST. There is, I fear, at the bottom of all this outcry about the Pharmaceutical Society, a feeling akin to jealousy; or otherwise, why denounce in such ungenerous and unbecomingly phrasological doings of the Council before making a fair and impartial inquiry into both sides of the question? You, Sir, I am sure, will grant me, in reply to your invitation to Pharmaceutical chemists, a fair amount of space to discuss this matter, even though I should introduce opinions which may seem somewhat at variance with the interests of the United Society. For my own part, and speaking personally, I have every wish that this Society, in so far as it may prove beneficial to all concerned, should go on and prosper. But if it be true that the incorporation of the entire trade into "one ostensible, recognized, and independent body" is a "consummation devoutly to be wished," then it becomes a question, how and in what manner the amalgamation of the younger with the older Society can be most effectually accomplished. It is not my intention on the present occasion to discuss this point, my object being chiefly to defend, if, indeed, defence is needed, the course adopted by the Pharmaceutical Council; and to consider its bearings on "outsiders," and all those who seem to infer that—

"By the pricking of their thumbs,
Something wicked this way comes."

In medical practice, I believe, it is generally considered desirable that a correct diagnosis should be made in order that success may be hoped for. In like manner will it now be desirable that the occupation of a chemist and druggist should be briefly reviewed, in order that such argument as may seem most applicable to the point at issue may be better understood and appreciated. I have before me a little volume entitled "The Poor Man's Cash Book," which furnishes much information respecting this particular business. I am not acquainted with the author of this publication, but he is certainly entitled to much praise for the very ingenious and generally truthful manner in which he has handled the subject.

[Our correspondent here transcribes several long passages from the work referred to, the general tendency of which is to prove that the business of the chemist and druggist is badly remunerated, extremely onerous, and incapable of supporting the vast numbers who have been unfortunately decoyed into it. We cannot find room for these extracts in the present number.]

The question here arises, if pharmacy is so unremunerative an occupation, what makes it so? Simply this: it is *overcrowded*. And why is it overcrowded? Because, whilst it is generally looked upon as a nice, clean, respectable, remunerative, and gentlemanly occupation, the terms of admission into it are so easy that any youth, however unfitted by nature or education, who may be so inclined, or whose parents may be too proud

to entertain for him a vulgar trade, and too poor to dream of educating him for an expensive profession, may enter it without further preparation than a mere three years' apprenticeship. That many, too many, do enter it under these conditions seems to me sufficiently clear. "True it is a pity, and pity 'tis 'tis true." But is there no remedy? I think, yes. Make the terms of admission into the business more stringent—raise higher and higher the pharmaceutical standard—legislate for compulsory examination, and quietly return all grocery, drysaltory, and general dealing to their proper and respective spheres. Is this arbitrary or severe? The trade demands it. Is it unjust? The future will justify it. And it will all be done by-and-by, and then aspiring youths will probably look before they leap, and no longer "persist in opening ten shops where the public only require one." This is our diagnosis and our remedy.

With regard to the question more especially in dispute, your correspondents fail to perceive in what manner the Council of the Pharmaceutical Society are working for the benefit of the whole trade. They are working for the benefit of the whole trade because they are working for the future—because they are endeavouring gradually, and as I think without injustice to anyone, to render the calling what it is capable of becoming, and what, indeed, it ought to become, if there is any truth in science or any value in professional ability. Why is the future so utterly ignored by "outsiders" and non-pharmacutists? Have they no sons or apprentices in whose welfare they take an affectionate interest? I am not quite sure, Sir, that were they to consent for the nonce to be "registered like dirty cabs," or "radially like sheep," or what would be still more affecting, permit themselves to be "shunned like niggers;" in other words, were they to support the Society, and attach themselves to the advancement, and consequently the success, of pharmacy for its own sake, so generous a sacrifice for so good an end, would not be worthy of the highest commendation. At least it would be twice blessed; blessed in their own present gratification, and in their sons' or apprentices' future prosperity. I commend to them, as earnest and intelligent men, this view of the matter, dismissing at once the "dirty cabs," the "sheep," and the "niggers," as foreign to my notion of any part of the process. "But," say they, "are we to ignore entirely our present interests and consent to be dictated to by the 'Pharmaceutical Society simply to benefit those who are to come after us?'" It is yet to be shown that chemists and druggists now in business will be one iota the worse off by the passing of the amended Pharmacy Act. On the contrary, this Act will begin to work beneficially the moment it comes into operation; and many a young man now in business will probably have cause before he "shuffles off this mortal coil," to bless the "Pharmaceutical Society" and its praiseworthy efforts for the general good of the whole trade. Ah, but the guinea fee for registration! True that looks suspicious; but can any blame be attached to men who are anxious to place their Society on the best possible footing? They invite all to join them without reserve, and they promise to work on cheerfully and unflinchingly until the object they have in view, viz., the advancement and general prosperity of the calling to which they belong, shall be completely and satisfactorily accomplished.

A great deal of what has been said about the "safety of the public," when taken on its own merits and not as means to an end, I regard as quite unequalled for. In reality the public are as safe in the hands of the careful and experienced dispenser as in those of the most crude pharmacist. But we want educated men, and gentlemen nevertheless, and to give half a dozen good and plausible reasons would be extremely easy were it not more than likely that with what I have yet to say it would occupy too much of your space. From the very fact that a chemist cannot, like a physician, bow a patient out of his presence with "the eloquence of pure science" on his lips, he is frequently subjected to a string of questions respecting the cause of disease and its treatment, which no medical man would ever attempt to answer, or ever could answer if he had: the apt. And, unfortunately for the success of any Medical Bill which interferes with this kind of "counter practice," the public are excessively provoking. Of course they are very ignorant (?) and very perverse, but that is no fault of ours. All we know is, they won't and they don't apply to the medical man even if they are so advised. Nineteen times out of twenty they either prescribe for themselves, or take nothing and get worse; or what is more to be lamented, they apply at the shop of some specious herbalist, or act on the advice of some chattering friend, anything, in fact, but the correct thing according to the notions of those who, like the gentlemen of the *Medical Times and Gazette*, "cling to the idea of the profession." Now, the educated chemist would also "cling to the idea of the profession," and as far as possible by enlightening the patient endeavour to overcome his extreme repugnance to seek proper medical advice. In the meanwhile, if he (the chemist) can strap a cut finger or cure a toothache, I presume for the sake of humanity he will not hesitate to do so. We all know that medicine at the best is but a speculative science (so called), and can do but little in the hands of the most learned. The Queen herself suffers from neuralgia, and the Emperor of the French from lumbago (so say the papers), and quinine, acouite, and colchicum, blisters, dry-cupping, and acupuncture *et hoc genus omne*, whether prescribed by an M.D. or an L.A.C. are no respects of persons. Disease, and finally death, is the common lot, and to this must we come at last.

But there is one point about this pharmaceutical question which, unfortunately, has developed itself into an "ulcer which never heals;" and very sore and tender does this ulcer appear to be. It so happens that a few pharmaceutical chemists have passed no examination, and yet are receiving equal advantages with those who have. *Prima facie* this seems just ground for complaint; but it must not be forgotten that these men cheerfully came forward with their guinea subscription at a time when the Society was at a discount, and when they might well have withheld their support. Let them have justice and their bond. All were invited, but the many shook their heads; and now that the doors are closed it seems too bad to speak ill of the few, because they are receiving the advantages which they had the courage to pay for. On this account (I mean on account of the few not having passed an examination) it seems that many chemists and druggists aspire to a title, viz., pharmaceutical chemist, (to be obtained by purchase), which would place them in a false light, both as regards the trade and the public at large. Is it not more than strange that any reasonable man, at this stage of the Society's progress, should expect a guinea registration fee to be considered equivalent to much study, much hard work in the laboratory, and much anxiety in preparing (i.e., preparing in a creditable manner) for an examination which, to say the least, is no trifling ordeal? The true "pharmaceutical

chemist" implies, or ought to imply a *distinction*, and this distinction cannot be purchased with gold, however forcibly your correspondents may argue to the contrary. If it be asked, "for what, then, am I required to pay my guinea?" the reply is, for the advancement of pharmacy for its own sake, and for the sake of the hundreds whose comparatively empty tills at the close of each day, are the *real* ulcers which never heal, and which never *can* heal, until some change is effected in the mode of admission into the business. No! If chemists and druggists failed a long time ago to see the value of the title when it was offered for their acceptance, it seems worse than useless now to give expression to a budget of vain regrets:—

"What's done is done; 't' amend were next and best to try,
Recrimination is but weak philosophy."

In no other way could the Society have acted at its commencement, and in no other way could its establishment be secured. But your readers may rest assured that time will remove this grievance completely, and leave only qualified men in the field to meet the requirements of the public. Not till then I believe will the public familiarise themselves with the title "pharmaceutical chemist." At present they have no idea as to the meaning it is intended to convey. By way of experiment, I put the question to three intelligent men. The first knew nothing whatever about it; the second entertained some vague notion that it meant something, but what he didn't know; and the third said he had always looked upon it as a piece of humbug calculated to mislead. If this, then, is the state of the public mind with regard to this "coveted" title, is it not time that some plan should be adopted to render its meaning intelligible to all? When that is done, I venture to say the public will appreciate the distinction it involves and act accordingly. But "registered chemists and druggists" have, or will have, nothing to fear from this, on account of circumstances which are too obvious to need explanation. Let it not be understood that in using the word *distinction*, I allude to anything further than is conveyed by the title "pharmaceutical chemist." M.D. is not perhaps a better man or a better practitioner than M.R.C.S., but M.D. having passed a higher-class examination, is fairly entitled to all the good to be derived from his improved position. In like manner, though of course in a lower degree, the chemist who has passed the examinations of the Pharmaceutical Society is fairly entitled to all the advantages (whatever they may be) peculiar to that ordeal; and he is naturally anxious to maintain the character and integrity of the position he has thus attained. He may not be, indeed he often is not, so good a man of business as many unexamined chemists, and the public I believe are no *safer* in his hands; but he has been at the trouble and expense of reading up, attending lectures, and so forth, and he naturally considers it but just and right that all this preparation should, in due course, bear fruit accordingly.

Another grievance on the part of your correspondents would appear to reside in the fact that "registered chemists and druggists" who have not passed the minor examination, are to be restricted from voting at meetings of the Society. This restriction seems fair enough, since it is next to impossible for the Society consistently to admit into its representation those who do not belong to it. Registration will not, *cannot* constitute a member, but it is a sufficient reply to the demand for the protection of existing interests, and this demand having been conceded, the required fee should not be objected to. That the council will apply this fee to the best advantage, is a point on which nothing can be advanced to the contrary. I have before said that "registered chemists and druggists" will have nothing to fear from the passing of the Pharmacy Act, so far as the public are concerned. The distinction then recognized by law will probably not influence to any material extent the public mind either one way or another, but it will work beneficially by checking at once the ever-increasing numbers who are entering the business under the delusion that it is a most remunerative one. I put the question on this footing, because I am appealing to practical, business-like men, who, perhaps wisely, regard status, improved social position, professional ambition, and all considerations of that character as of secondary importance.

But if the Pharmaceutical Society is to carry everything before it, what of the United Society? Is that to be contemptuously ignored, and its three thousand members unceremoniously disposed of at one fell swoop? I have already intimated that it is not my intention to discuss this point, but I may state my belief, that *could* the United Society quietly and consistently retire before the provisions of the amended Bill, or, what amounts to the same thing, give them its hearty support, it would be better—much better for all; but so long as there is a feeling abroad that the Pharmaceutical Council are acting in direct opposition to the interests of the United Society, such an arrangement is scarcely to be hoped for. I have endeavoured to show that the Pharmaceutical Council do *not* stand in this position, but, on the contrary, are working for the benefit of the whole trade; and I have pointed out *in what manner* they are doing this. We have seen where the evil lies. Let the truth be repeated. *The Pharmaceutical examinations will keep out of the business two or three out of every six who would otherwise rush headlong into it; and how great a boon this will be, only chemists and druggists themselves can properly estimate.* The greatest possible good that could be done to the business, would be to lessen the number of those who are engaged in it; and the two things best calculated to effect this are—time, and a high standard of qualification. But if this is not to be, if the United Society are successful in their projected opposition, then things must go on as now. Each Society must stand on its own merits, and adopt such measures from time to time as circumstances may seem to demand. So far as things have yet gone, the arguments that have been brought forward in opposition to the proposed measure are certainly do not justify a continuance of that strenuous opposition, which, if successful, may possibly place the burden on the shoulders of those who are least able to bear it. I trust, therefore, the members of the United Society will think this matter over again. It will detract nothing from their dignity or their wisdom to support the older Society, and throw in their efforts for the attainment of an object which must benefit all. If the Pharmaceutical Council refuse to recognise the United Society as such (wisely or not I cannot say), it is, perhaps, a pardonable weakness. I call it *weakness*, because, in the affairs of men, this kind of justifiable pride will, and often does step in to alter, amend, and determine the point to be decided upon, without reference to anything which wisdom may dictate, or reason approve. But if the gentlemen of the Pharmaceutical Council refuse to recognise the United Society, they at least appeal with

an earnest sincerity to all chemists and druggists; and whilst very properly acceding to the demand for the protection of existing interests, hold out for universal acceptance *the greatest boon that could by any possibility be conferred upon the trade.* I may add, that the laudable endeavour to keep out of the business by high class examinations all those who from any cause are not wanted in it, is not only sound policy, but will prove, by-and-by, nothing less than an act of humanity to all concerned. Will non-pharmacutists refuse the offer, because the council, actuated by a spirit of fairness, decline to place them on a level with examined members? The fact that a certain number who were willing to pay for the privilege were admitted years ago without an examination is nothing to the point, and, as an argument, should be dismissed at once. The grievance is one which is yearly becoming less and less. It belongs exclusively to the past, and has nothing whatever to do with the present.

But, again we ask, if all this is to happen, what is to become of the United Society? Will it—*must* it commit self-destruction, or die, in due course, of *ennui*? Nothing of the kind. Should the Pharmacy Bill become law, the United Society will still have its special work to do, may still number its members by thousands, and still be instrumental in supplying a want which, before its establishment, was much felt. Let us, then, calmly and fairly look at both sides of the question, and I don't not that the wisdom and experience of those more especially concerned will lead them in the right direction, and enable them to settle the question on its own merits, to the increased prosperity of those now in the field, not less than to the welfare and well-being of all future pharmacutists.

Apologising for trespassing so largely on your space,

I am, Sir, yours obediently,

W. W.

Member, by examination, of the Pharmaceutical Society.

P.S.—Since writing the above, I have read the article entitled—"The Proposed Legislation affecting Pharmacy," in the May number of the *Pharmaceutical Journal*. As a pharmaceutical chemist I see no objection to the admission of chemists and druggists to the privileges of the Society, provided it can be done consistently with established rule, and provided also the co-operation of the entire trade will be thereby secured. But the point insisted on is the restriction of the title conveying evidence of qualification to examined members. If there are any "outsiders" who are ambitious to *soil under false colours* (and I will not think this of the trade yet), they may rest assured that by calling themselves "members of the Pharmaceutical Society," they will be placed on a perfect equality with pharmaceutical chemists in the matter of their patron the public, who, as a rule, will be found unconscious of the difference.

ACCIDENTAL POISONING.

TO THE EDITOR OF THE CHEMIST AND DRUGGIST.

Westminster, May 9, 1864.

DEAR SIR,—Every chemist, pharmaceutical or otherwise, will much regret the unhappy occurrence at Liverpool, where a much respected member of the Pharmaceutical Society has by one of those unaccountable mistakes been held responsible for preparing a prescription with strychnine instead of James's Powder. Here is a case illustrating exactly the necessity for all of us to be lenient with our brethren, where as in this case, life has been lost through accident, thoughtlessness if you will, but not ignorance. Who but dispensers know the risk often run by the continued chattering of the customer waiting to be served? In this case, ignorance can hardly be imputed, for the proprietor is a leading member of the educated Society in Bloomsbury-square, and the gentleman acting as his assistant, I presume is also a member, and who during the past two years has dispensed from 5,000 to 6,000 prescriptions. I imagine "50,000 to 60,000" to be a typographical error. Ignorance then cannot be given in this case as a cause why poisons should be dispensed by Pharmacutists only, but clearly shows that the special training of this much vaunted body does not prevent an accident, which had it occurred to an outsider, would have been put forth as a further reason, for compulsory education under Pharmaceutical direction. This case is a type of the majority, and which as often occurs to members of the Pharmaceutical Society as to non-members. It is not a question for society-capital to be made of, but one for all of us deeply to regret, well knowing that with any amount of education all are liable to accidents, and unfortunately in our business, accidents too often irreparable. Then let us rather take warning, and let those who have tried to raise the pharmacutists at the expense of others, remember that the like may happen to any of us, and that it would be more becoming to try and excuse any who may have acted in the same unaccountable manner, as this member of the Pharmaceutical Society.

I am, Sir, yours, &c.,
JOHN WADE.

TO THE EDITOR OF THE CHEMIST AND DRUGGIST.

SIR,—The late melancholy case of accidental poisoning at Liverpool has called forth letters from different persons, reminding chemists of the vast responsibility resting upon them, and the necessity existing that the utmost care should be taken in the dispensing of medicines. Various precautionary measures, too, have been suggested, such as the use of poison-labels, corks, &c., and the registration of all chemists by an institution established ostensibly for the protection of the public. Now, if we look at the matter for a moment, we shall perceive that these good advisers are at fault as to the cause of mistakes, therefore of course, as to the way of preventing them. It is not because a man has not learnt the difference between James's powder and strychnia that he lets down the latter in stead of the former, and thus poisons the patient. He may have the certificate of the Pharmaceutical Society framed and glazed in the shop window, and all his bottles covered with sandpaper, yet he is just as likely to err as if none of these things existed. Mistakes of this kind very seldom arise from ignorance, but from the state of mind a person is in. A man may, especially in our business, be so harassed as to become unconscious of what he does; he cannot therefore be considered accountable for his actions, so that if he does make a fatal mistake it must be the height of injustice to bring a criminal verdict against him. Everyone who has stood behind a counter where much dispensing is carried on, knows how sometimes the mental faculties will be exhausted.

so that it is a wonder more mistakes do not occur. A chemist ought to have as little to confuse and distract him as possible, but lately everything appears to be done to make his position more trying. We take, for instance that interesting prodigy of medical science, the *British Pharmacopœia*, a publication so confusing, and at the same time so ridiculous, that a person not knowing its origin might ask the question, whether it emanated from a lunatic asylum or a conclave of old women.

But again: the medical profession now appear arrayed against the pecuniary interests of the poor druggist, jealous of his sometimes getting an odd twopence out of a cough mixture, which, of course, no one but a professor of the healing art has a right to compound. The Medical and Pharmaceutical Councils are striving in some way or other to contract the power of the chemist. To induce the people at large to give their countenance to an Act, they are told, and of course believe, its existence is essential to their personal safety. Now we don't wish to dispute this fact, but it certainly seems rather strange that the very place where any danger exists is left unguarded; it certainly seems hardly safe for hucksters, grocers, &c., entirely ignorant of the nature of medicines to be allowed indiscriminately to retail them, and (which has been done) substitute pulv. opii ture. for pulv. rhei ture., and oxalic acid for Epsom salts. Yet this is to be permitted, while a man who has been in the business for years as a respectable chemist, is to pay a guinea for the privilege of making up a prescription. Will the chemists and druggists of England submit thus to be trampled on, by powers with which they have nothing at present to do? Why do they not rise up to a man, and set at defiance these attempts to contract their energies and fleece their pockets? They would then show themselves worthy of the name of Englishmen, and once again realise the truth of the saying, that "Britons never will be slaves."

CHEMIST.



SAVORY AND MOORE'S ATROPIZED AND CALABARIZED GELATINE.

In the CHEMIST AND DRUGGIST of July 15, 1863, is an account by Mr. Tegetmeier of the singular properties of the ordeal bean of Calabar, the *Physostigma venenosum*. The article describes the singular effect of this poisonous bean in causing contraction of the pupil, when a solution is dropped into the eye, its action being precisely the reverse of that of the *Atropa Belladonna*.

It is obvious that so potent and peculiar an agent was not likely to remain long unutilized, and as soon as a supply of this scarce seed could be obtained it was applied to practical purposes. The mode of using it, by dropping a solution into the eye, being found inconvenient, Mr. Stretfield proposed saturating small pieces of paper with the solution, and placing them beneath the eyelid. This plan is also inconvenient, as it necessitates the removal of the paper subsequently. Messrs. Savory and Moore have recently, at the suggestion of Mr. Ernest Hart, introduced a new and very convenient mode of employing the remedy.

The solution of the Calabar bean is mixed with gelatine, and then evaporated, so as to leave an exceedingly thin film. This film is cut up into minute circular discs, about the size of this letter **O**.

One of these is easily placed in the eye, by directing the patient to gaze upwards, and while the eye is in this position drawing down the under lid and applying the gelatine to the lower part of the ball. The eye is then closed, the gelatine speedily softens, and the remedial agent is slowly dissolved and absorbed. As before stated the action of the Calabar bean is to cause complete contraction of the iris, so as to give rise, temporarily, to the condition of imperforate iris. The advantage to the oculist of being able to produce this condition at will, need not be insisted on.

Messrs. Savory and Moore have also prepared gelatine discs with belladonna for dilating the pupil. These are made of several degrees of strength, containing respectively $\frac{1}{30,000}$ th, $\frac{1}{100,000}$ th, and $\frac{1}{1,000,000}$ th of a grain of atropine. The certainty of action of these discs and the greater convenience in use over the ordinary mode of employing belladonna is evident. Both remedies are packed in very small glass tubes, each containing 150 discs.

So successful has this mode of employing remedial agents been found in practice, that Messrs. Savory and Moore are now preparing morphine, ergotine, iodide of potassium, bromide of potassium, and bromide of ammonium in the same manner.



General Note.—We are unable to find room in the present number for our promised article on the Process of Percolation. Several queries have been received, which will be answered in our next.

Argus (Teignmouth).—The little book ("Wilkinson's Druggists' Price Book, 1837,") kindly sent to us by this correspondent is a very capital one. It contains the whole of the preparations used in pharmacy, whether official or not with the English names and doses added, a column being left for prices. We are sorry to say that we know of no similar work of the present day. If Argus does not mind possessing two books instead of one, we recommend him to procure "Goddard's Chemists' Price Book," and "The Prescriber's Pharmacopœia," reviewed in our present number.

GAZETTE.

BANKRUPTS.

HENRY BROADHURST, Liverpool, chemist.
THOMAS GOODISON, Sheffield, chemist.
GEORGE GREAVES, Salford, chemical manufacturer.
THOMAS WOOTTON GURNEY, Roman-road, Bow, acetic acid maker.

PARTNERSHIPS DISSOLVED.

BELL and BATY, Hexham, Northumberland, chemists.
CLARKE and SON, Stockton-on-Tees, chemists.
FERRIS, TOWNSEND, LAMOTTE, and BOURNE, Bristol, chemists.
M. E. and J. FOSTER, Cullompton, Devonshire, chemists.

SCOTCH SEQUESTRATIONS.

J. TEMPLEMAN and Co., Glasgow, manufacturing chemists.
THOMSON and SMITH, Dundee, perfumers.



London, May 12, 1864.

The business in Chemicals since our last has been very large in several articles, and prices have considerably advanced. Extensive sales have been made in Tartaric Acid, the price advanced to 1s. 8d., but has closed rather quieter at 1s. 7½d. to 1s. 8d. In Citric Acid also extensive transactions have taken place, and the prices closed firm at 1s. 9d. Oxalic Acid is also dearer, with a large business; the present prices are 11d. to 1s. Iodine has also been largely purchased, but prices close not so firm; the latest quotations were 6½d. to 7d. Cream Tartar has been in much better demand, and prices have advanced to 117s. 6d. to 120s. for the best. Grey Tartars are also dearer and more doing. Prussiate of Potass remains dull at 11½d. to 11¾d. Bichromate is quiet, and rather easier; sales made at 7½d. to 7¾d. Soda Crystals are without change, and a moderate business done at 97s. 6d. ex ship. Ash is 2½ to 2¾, and Caustic Soda scarce at 15s. 6d. to 16s. A very large business has been done in Pelitius Quinine at 6s. to 6s. 1d., the latter price is now demanded. Sulphate of Copper is firm at 32s. 6d. for the best brands. Sal ammoniac in fair request at 37s. to 38s. for fine, and 36s. for seconds. Bleaching Powder is steady at 14s. 6d. to 15s. 6d. Roll Brimstone is 11s., and Flour 12s., which are late prices. Sulphate of Ammonia is steady at 13s. 3d. to 14s. 6d. Refined Saltpetre is lower; sales made at 38s. to 38s. 6d. cash f. o. b. A good business has been done in Linseed Oil at 39s. to 39s. 6d.; now 4½s. asked. Rape is steady at 41s. 6d. for Brown, and 43s. 6d. to 44s. for Foreign Refined. Turpentine is lower; small sales made at 81s. to

81s. 6d. Petroleum is dearer, and large transactions; last prices paid were 2s. 3½d. to 2s. 4d., and Crude £19 10s. Ashes are without change.

In Drugs a moderate business has been done, prices generally without change, the money market being against speculative purchasers. A fair proportion of Castor Oil has been brought forward, which partly sold at rather easier prices, pale yellow to good seconds 4½d. to 5½d., fine 6½d. Anniseed is easier; sales made at 6s. 7d. to 6s. 8d. A few cases Oil Cassia sold at 9s. 3d. to 9s. 6d. About 30 cases Citronelle sold at 5½d. to 5¾d. Cape Aloes are 6d. dearer; good or fine sold at 46s. to 47s. 6d. Other kinds are without change. Some large parcels of ordinary Gum Benjamin to be sold at 27s. 6d. to 32s. Turkey and East India Arabic, are steady. Olibanum is again dearer. Kowrie is 3s. to 5s. lower, but more selling. Sandrac is 2s. to 2s. 6d. cheaper. Safflower is rather easier. Cochineal has declined about 1d. Camphor is dull, at £5 to £5 5s. for China. Turmeric is dearer. Bengal sold at 36s. to 37s., and Madras 30s. to 38s. 6d. Jamaica Bees Wax is steady. East India sorts are rather cheaper. Gambier is firm, and a fair business done at 23s. 6d. to 24s., and Cutch is steady at 26s. 6d. Shellac is without change. A moderate business has been done in Rhubarb at previous terms. A parcel of common Tonquin Musk sold at 25s. to 27s. Cardamoms are without change, except Ceylons, which sold at 5s. 1d. to 5s. 4d. being dearer. Barks are without change. Sarsaparilla is selling at former terms. In other goods there is no change.

PRICE CURRENT.

These quotations are the latest for ACTUAL SALES in Mining Lane. It will be necessary for our retail subscribers to bear in mind that they cannot, as a rule, purchase at the prices quoted, inasmuch as these are the CASH PRICES IN BULK. They will, however, be able to form a tolerably correct idea of what they ought to pay.

	1864. s. d.	1864. s. d.	1863. s. d.	1863. s. d.
ARGOL, Cape, per cwt.....	87 6	105 0	85 0	102 6
French	60 0	81 0	40 0	60 0
Oporto, red	46 0	48 0	45 0	48 0
Sicily	74 0	77 0	70 0	78 0
Naples, white	65 0	80 0	65 0	80 0
Florence, white	87 6	95 0	90 0	97 6
red	80 0	85 0	80 0	85 0
Bologna, white	90 0	95 0	110 0	115 0
ARROWROOT. (Duty 4½ per cwt.)				
Bermuda, per lb.....	1 6	1 10	1 4	1 7
St Vincent	0 4½	0 8	0 4	0 7½
Jamaica	0 4	0 6	0 4½	0 6
Other West India	0 3	0 4½	0 3	0 3½
Brazil	0 2	0 3	0 2	0 4
East India	0 2½	0 6	0 2½	0 4
Natal	0 5½	0 8½	0 5½	0 9½
Sierra Leone	0 5	0 5½	0 3½	0 5
ASHES.....per cwt.				
Pot, Canada, 1st sort	35 0	36 0	32 6	0 0
Pearl, ditto, 1st sort	34 0	35 0	32 6	0 0
BRIMSTONE,				
rough.....per ton.....	170 0	180 0	122 6	125 0
roll	215 0	220 0	180 0	0 0
flour	245 0	250 0	220 0	225 0
CHEMICALS,				
Acid—Acetic, per lb.	0 4	0 0	0 3½	0 4
Citric	1 8½	1 9	1 6	1 6½
Nitric	0 5	0 5½	0 4	0 5½
Oxalic	0 11	1 0	0 8	0 8½
Sulphuric	0 0½	0 0	0 0½	0 0
Tartaric crystal.....	1 7½	1 8	1 6½	0 0
powdered	1 8	1 8½	1 6½	1 7
Alum	122 6	135 0	140 0	150 0
powder	145 0	150 0	160 0	0 0
Ammonia, Carbonate, per lb.	0 5½	0 6	0 5	0 5½
Sulphate	205 0	200 0	200 0	230 0
Antimony, ore	200 0	210 0	200 0	230 0
crude	26 0	0 0	22 0	23 0
regulus	36 0	37 0	40 0	0 0
French star	36 0	37 0	40 0	0 0
Arsenic, lump	15 0	15 6	16 6	17 0
powder	9 0	9 3	6 6	7 0
Bleaching powder.....	14 6	15 6	10 0	10 6
Borax, East India refined.....	0 0	0 0	52 6	0 0
British	56 0	0 0	50 0	52 0
Calomel	2 11	0 0	0 0	2 2
Camphor, refined	1 6½	1 7	2 2	2 5
Copperas, green	52 6	55 0	57 6	60 0
Corrosive Sublimate, per lb.	2 3	0 0	1 11	0 0
Green Emerald	0 0	0 0	0 0	0 0
Brunswick.....per cwt.....	0 0	0 0	0 0	0 0

	1864. s. d.	1864. s. d.	1863. s. d.	1863. s. d.
CHEMICALS.				
Iodine, dry	0 6½	0 7	0 3½	0 3½
Magnesia, Carbon	42 6	45 0	42 6	45 0
Calcined	1 6	1 8	1 6	1 8
Minium, red	21 0	21 6	22 0	22 6
orange	32 6	33 0	32 0	33 0
Potash, Bichromate	0 7½	0 7½	0 8½	0 9
Chlorate	1 1	0 0	0 11½	1 0½
Hydriodate	0 6	0 6½	0 4½	0 5
Prussiate	0 11½	0 11½	0 11½	0 0
red	1 10	1 11	2 1	2 2
Precipitate, red	3 0	0 0	2 9	0 0
white	3 0	0 0	2 9	2 10
Prussian Blue	1 0	1 10	1 0	1 10
Rose Pink	29 0	0 0	29 0	0 0
Sal-Acetos	0 12	0 0	0 10½	0 10½
Sal-Ammoniac				
British	36 0	38 6	35 0	37 6
Salts, Epsom	8 0	8 6	8 0	8 6
Glauber	5 0	5 6	5 0	5 6
Soda, Ash	0 2½	0 2½	0 2½	0 0
Bicarbonate	12 0	12 6	12 6	13 0
Crystals	0 0	97 6	97 6	0 0
Sugar Lead, white	38 0	39 0	37 0	0 0
brown	28 0	29 0	25 0	0 0
Sulphate Quinine.....per oz.				
British, in bottle	6 3	6 6	6 6	0 0
Foreign	6 0	6 1	6 3	0 0
Sulphate Zinc.....per cwt.....	14 6	15 0	14 6	15 0
Verdigris	0 11	1 0	1 1	1 3
Vermilion, English	2 8	3 0	2 8	3 1
China	2 9	2 10	2 2	2 4
Vitriol, blue or Rom. per ct.	32 6	33 0	31 0	33 6
COCHINEAL, per lb.				
Honduras, black	3 3	4 6	2 6	4 2
silver	2 4	3 7	1 4	3 4
Mexican, black	3 5	3 9	2 7	3 0
silver	3 2	3 4	2 6	2 7
Lima	0 0	0 0	2 7	3 2
Teneriffe, black	3 6	4 0	2 7	3 2
silver	3 4	3 6	2 6	2 8
DRUGS,				
Aloes, Hepatic	100 0	170 0	130 0	200 0
Socotrine	170 0	300 0	220 0	380 0
Cape, good	45 0	48 0	45 0	47 6
inferior	30 0	44 0	28 0	42 0
Barbadoes	50 0	320 0	60 0	360 0
Ambergris, grey	15 0	19 0	15 0	18 0
Angelica Root	20 0	35 0	20 0	35 0
Aniseed, China star.....	180 0	200 0	100 0	105 0
German, &c.	20 0	39 0	19 0	38 0
Balsam, Canada	0 11	0 0	1 0	0 0
Capivi	1 8	1 9	1 5	1 6
Peru	4 9	4 11	4 10	0 0
Tolu	3 6	3 7	3 9	0 0
Bark, Cascarilla.....per cwt.....	25 0	38 0	23 0	40 0
Peru, crown & grey per lb.	1 0	2 0	0 10	2 2
Calisaya, flat	3 0	3 4	3 3	4 0
quill	2 9	3 3	3 0	3 9
Carthagena.....	1 2	2 0	1 3	2 4
Pitayo	1 8	2 6	1 9	2 6
Red	2 6	9 0	3 0	7 6
Bay Berries.....per cwt.....	0 0	0 0	22 0	40 0
Bucca Leaves.....per lb.....	0 3	0 11	0 2½	1 6
Camomile Flowers	25 0	65 0	35 0	65 0
Camphor, China	100 0	105 0	150 0	152 6
Canella alba	23 0	35 0	19 0	38 0
Cantharides	2 4	2 6	2 2	2 6
Cardamoms, Malabar, good	5 6	7 0	6 6	7 0
inferior	4 6	5 3	5 8	6 6
Madras	3 3	5 0	3 6	6 8
Ceylon	5 1	5 3	4 9	5 0
Cassia Fistula.....per cwt.....	20 0	35 0	15 0	61 0
Castor Oil, 1st pale	0 6	0 7½	0 5½	0 6
2nd	0 4½	0 5½	0 4½	0 5½
inferior and dark	0 4½	0 4½	0 4½	0 4½
Bombay, in casks	0 4½	0 4½	0 0	0 0
Castor Oil	1 0	20 0	1 2	26 0
China Root	15 0	20 0	10 0	15 0
Cocculus Indicus	18 0	20 0	10 0	13 0
Cod Liver Oil	6 3	12 6	4 2	6 0
Colocyath, apple	0 7	1 0	0 8	1 0
Colombo Root	90 0	120 0	15 0	48 0
Cream Tartar				
French	117 6	0 0	115 0	0 0
Venetian	120 0	0 0	117 6	0 0
grey	95 0	105 0	110 0	0 0
brown	85 0	92 6	97 6	105 0
Croton Seed	70 0	80 0	40 0	50 0
Cubebs	92 6	100 0	110 0	115 0
Cumin Seed	21 0	32 0	27 0	35 0
Dragon's blood reed.....	200 0	300 0	200 0	300 0
lump	90 0	260 0	95 0	260 0
Galangal Root	20 0	22 0	24 0	32 0
Gentian Root	18 0	19 0	21 0	22 0
Guinea Grains	130 0	137 6	47 0	50 0
Honey, Narbonne	40 0	80 0	60 0	80 0
Cuba	26 0	38 0	24 0	36 0
Jamaica	27 0	63 0	26 0	73 0
Ipecacuanha	8 3	8 9	6 7¼	6 6
Isinglass, Brazil	1 10	4 6	0 10	3 10
East India	0 6	4 3	0 9	3 0
West India	3 2	3 4	3 0	3 3
Russian	9 6	11 0	9 6	13 0
Jalap	0 9	5 2	1 0	4 8

DRUGS—continued.

	1864.	1864.	1863.	1863.
	s. d.	s. d.	s. d.	s. d.
Juniper Berries per cwt.	6 0	9 0	8 0	9 0
German and French ..	8 0	10 0	8 0	10 0
Italian	0 0½	0 0½	0 0½	0 0
Lemon Juice per deg.	0 0½	0 0½	0 0½	0 0
Liquorice per cwt.				
Spanish	80 0	83 0	80 0	83 0
Italian	80 0	80 0	80 0	80 0
Manna, flaky	2 7	2 9	3 0	3 6
small	1 4	0 0	1 6	0 0
Musk per oz.	22 0	34 0	18 0	28 0
Nux Vomica	12 0	15 6	9 0	11 0
Opium, Turkey	18 0	20 0	16 0	19 6
Egyptian	10 0	16 0	7 0	12 0
Orris Root per cwt.	26 0	30 0	26 0	28 0
Pink Root per lb.	3 0	3 6	3 0	3 3
Quassia (bitter wood) per ton	120 0	130 0	90 0	100 0
Rhatany Root per lb.	1 0	1 9	0 9	1 3
Rhubarb, China, round ..	2 9	6 0	1 6	4 4
flat	3 6	6 3	1 9	4 6
Dutch, trimmed ..	0 0	0 0	5 6	6 0
Russian	12 6	13 0	12 6	13 0
Saffron, Spanish	32 0	33 0	35 0	36 0
Salep. per cwt.	140 0	145 0	140 0	160 0
Sarsaparilla, Lima	1 0	1 5	0 19	1 4
Para	0 11	1 2	0 9	1 1
Honduras	0 11	1 6	0 8	1 3
Jamaica	1 6	2 3	1 2	2 2
Sassafras per cwt.	14 0	15 0	0 0	0 0
Seammony, virgin .. per lb.	32 0	38 0	27 0	34 0
second	12 0	23 0	14 0	24 0
Seneka Root	3 6	4 0	4 6	4 9
Senna, Calcutta	0 0	0 0	0 0	0 0
Bombay	0 3½	0 4½	0 2½	0 4½
Tinnevely	0 4	1 6	0 4	1 6
Alexandria	0 3½	0 8	0 5	0 8
Snake Root	5 0	5 6	3 6	3 9
Spermacei, refined ..	1 9	1 1	1 0	1 2
Squills	0 0½	0 2½	0 1	0 2½
Tamarinds, E. India, per cwt.	20 0	22 0	10 0	13 6
West India	15 0	28 0	18 0	34 0
Terra Japonica—				
Gambier per cwt.	23 6	27 0	21 0	25 0
Cutch	26 6	27 0	25 0	25 6
Valerian Root, English ..	20 0	30 0	20 0	40 0
Vanilla, Mexican .. per lb.	26 0	38 0	25 0	59 0
Wormseed per cwt.	11 0	12 6	2 0	0 0
GUM per cwt.				
Ammoniac, drop	100 0	120 0	100 0	120 0
lump	30 0	85 0	15 0	65 0
Animi, fine pale	200 0	220 0	220 0	250 0
bold amber	190 0	210 0	190 0	210 0
medium	160 0	180 0	160 0	180 0
small and dark	100 0	150 0	100 0	125 0
ordinary dark	40 0	95 0	50 0	95 0
Arabic, E. I., fine pale picked	60 0	66 0	54 0	62 0
unsorted, good to fine	48 0	58 0	34 0	80 0
red and mixed	35 0	46 0	20 0	30 6
sittings	20 0	30 0	15 0	30 0
Turkey, picked, good to fine	120 0	150 0	115 0	180 0
second and inferior ..	65 0	110 0	40 0	110 0
in sorts	32 0	50 0	32 0	59 0
Gedda	33 0	37 0	24 0	26 0
Barbary, white	57 0	64 0	42 0	50 0
brown	45 0	47 0	28 0	29 0
Australian	28 0	34 0	24 0	25 0
Assafetida, fair to good ..	38 0	75 0	30 0	112 0
Benjamin, 1st quality	350 0	850 0	350 0	630 0
2nd	280 0	300 0	280 0	300 0
3rd	50 0	240 0	50 0	200 0
Copal, Angola, red	85 0	95 0	95 0	100 0
pale	85 0	90 0	85 0	100 0
Benguella	80 0	95 0	85 0	100 0
Sierra Leone .. per lb.	0 4	1 0	0 5	1 6
Manilla	25 0	50 0	25 0	44 6
Dammar, pale	36 0	45 0	36 0	48 0
Galbanum	100 0	120 0	100 0	120 0
Gamboge, picked, pipe ..	150 0	190 0	160 0	200 0
in sorts	80 0	140 0	90 0	150 0
Gusiacum per lb.	0 6	1 6	0 6	1 5
Kino	320 0	500 0	180 0	260 0
Kowie	70 0	60 0	38 0	52 0
Mastic, picked	4 6	5 0	5 0	5 3
Myrrh, gd. and fine, per cwt.	140 0	190 0	150 0	170 0
sorts	70 0	130 0	70 0	130 0
Olibanum, pale drop	75 0	88 0	60 0	77 6
amber and yellow ..	48 0	74 0	48 0	62 0
mixed and dark	14 0	35 0	16 0	35 0
Senegal	75 0	80 0	48 0	50 0
Sandrac	80 0	180 0	85 0	110 0
Tragacanth, leaf	180 0	260 0	180 0	300 0
in sorts	100 0	130 0	100 0	130 0
OILS..... per tun	£ s.	£ s.	£ s.	£ s.
Seal	42 0	47 0	42 0	48 10
Sperm, body	73 0	75 0	82 0	82 10
Cod	51 0	52 0	47 10	48 0
Whale, Greenland	0 0	0 0	0 0	0 0
South Sea, pale	42 0	48 0	42 0	45 10
East India Fish	37 0	40 0	38 10	0 0
Olive, Galipoli	60 0	62 0	58 0	0 0
Florence, half-chest ..	20 0	21 0	1 0	1 2
Coccanut, Cochin .. per cwt.	41 0	41 6	50 6	51 6
Ceylon	37 6	38 6	49 0	50 0
Sydney	34 0	37 6	42 0	47 0
Ground Nut and Gin.				
Bombay	38 6	40 0	45 0	46 0

OILS—continued.

	1864.	1864.	1863.	1863.
	s. d.	s. d.	s. d.	s. d.
Madras per cwt.	40 0	0 0	48 0	0 0
Palm, fine	35 0	36 0	37 0	37 6
Linseed	39 9	40 0	44 3	0 0
Rapeseed, English, pale ..	42 0	43 0	51 6	0 0
brown	40 0	40 6	49 0	0 0
Foreign ditto	43 6	44 0	52 6	53 0
brown	41 0	41 6	49 6	50 0
Lard	48 0	48 6	49 0	0 0
Tallow	41 0	41 6	39 0	40 0
Rock Crude per ton	19 10	20 0	8 0	14 5
OILS, Essential—				
Almond, essential ... per lb.	19 0	0 0	19 0	0 0
expressed	0 0	0 0	0 0	0 0
Aniseed	6 8	0 0	5 6	5 7
Bay	110 0	120 0	110 0	120 0
Bergamot	7 0	10 0	7 0	10 6
Cajeputa, (in bond) .. per oz.	0 2½	0 2½	0 2½	0 2½
Caraway	4 3	5 6	4 3	5 6
Cassia	9 3	9 6	7 11	8 0
Cinnamon (in bond) .. per oz.	1 0	2 9	1 6	3 6
Cinnamon Leaf	0 2	0 4½	0 2	0 4½
Citronel	0 5½	0 6½	0 5½	0 6
Clove	0 2	0 4	0 2	0 4
Croton	0 9	1 0	0 0	0 0
Juniper	1 10	3 0	1 10	3 0
Lavender	2 6	4 6	2 6	4 6
Lemon	5 6	7 0	4 0	9 0
Lemongrass	0 10½	0 11	0 6½	0 7
Mace, ex. per oz.	0 1	0 2½	0 1½	0 2
Neroli	5 0	7 0	5 0	7 0
Nutmeg	0 1½	0 2½	0 1	0 2
Orange	6 0	7 0	5 0	6 6
Otto of Roses per oz.	15 0	25 0	14 0	22 0
Peppermint, per lb.				
American	9 0	13 6	8 6	14 0
English	34 0	36 0	33 0	34 0
Rhodium	3 6	5 6	3 6	5 6
Rosemary	1 9	3 0	1 8	3 0
Sassafras	4 0	4 6	3 0	4 0
Spearmint	5 0	8 6	5 0	8 6
Spike	0 0	0 0	1 3	1 6
Thyme	1 9	2 3	1 9	2 3
PITCH, British per cwt.	12 0	0 0	12 0	0 0
Swedish	0 0	0 0	0 0	0 0
SALEPETRE, per cwt.				
English, 6 per cent. or under	33 6	34 0	37 0	38 0
over 6 per cent.	33 0	33 6	36 0	36 6
Madras	31 0	33 0	35 0	37 0
Bombay	30 0	31 0	34 0	36 0
British-refined	38 0	38 6	40 0	40 6
Nitrate of soda	15 6	16 6	13 9	14 6
SEED, Canary per gr.	54 0	60 0	38 0	50 0
Caraway, English .. per cwt.	28 0	34 0	0 0	0 0
German, &c.	27 0	30 0	0 0	0 0
Coriander	10 0	14 0	10 0	12 0
East India	0 0	0 0	0 0	0 0
Hemp	40 0	44 0	40 0	44 0
Linseed, Black Sea	62 0	64 0	63 6	74 0
Calcutta	58 0	61 0	64 0	67 0
Bombay	64 0	66 0	69 0	70 0
Egyptian	62 0	0 0	62 0	63 0
Mustard, brown .. per bush.	7 0	12 0	7 0	12 0
white	7 0	9 0	6 0	8 6
Poppy, East India .. per qr.	54 0	55 0	60 0	0 0
Rape, English	0 0	0 0	0 0	0 0
Danube	0 0	0 0	70 0	0 0
Calcutta fine	58 0	59 0	67 0	68 0
Bombay	63 0	64 0	69 0	77 0
Teel, Sesmy or Gngy	58 0	63 0	66 0	70 0
Cotton	155 0	162 6	160 0	0 0
Ground Nut Keruels per ton	300 0	310 0	340 0	350 0
SOAP, London yel. ... per cwt.	20 0	34 0	22 0	36 0
mottled	34 0	36 0	26 0	38 0
enrd	46 0	50 0	50 0	0 0
Castile	40 0	41 0	40 0	41 0
Marsilles	40 0	42 0	40 0	42 0
Soy, China per gal.	2 6	2 9	2 1	2 3
Japan	0 0	0 0	0 10	1 0
Sponge, Turkey, fine picked	19 0	23 0	20 0	24 0
fair to good	7 0	17 0	8 0	18 0
ordinary	2 6	6 0	3 0	6 0
Pahama	0 4	1 3	0 4	1 3
TURPENTINE, Rough, per ct.	0 0	0 0	0 0	0 0
Spirits, French	81 0	81 6	93 0	0 0
American, in casks ..	0 0	0 0	97 0	0 0
WAX, Bees, English	170 0	175 0	170 0	175 0
German	165 0	165 0	162 6	180 0
American	175 0	180 0	165 0	175 0
white fine	0 0	0 0	0 0	0 0
Jamaica	185 0	192 6	165 0	180 0
Gambia	185 0	195 0	170 0	175 0
Mogadore	125 0	160 0	120 0	155 0
East India	150 0	180 0	140 0	170 0
ditto, bleached	210 0	240 0	170 0	230 0
vegetable, Japan	56 0	75 0	68 0	89 0
WOOD, Dye, per ton				
Pastic, Cuba	160 0	165 0	145 0	0 0
Jamaica	125 0	130 0	120 0	149 0
Savanna	125 0	0 0	125 0	127 6
Zante	140 0	150 0	0 0	0 0
Logwood, Campeachy ..	190 0	200 0	180 0	190 0
Honduras	105 0	110 0	130 0	140 0
St. Domingo	80 0	0 0	105 0	110 0
Jamaica	90 0	85 0	90 0	0 0